

PSYCHOLOGICAL ABSTRACTS

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GENERAL

3419. Andreucci, T. *L'immortalità dell'anima e la vita futura.* (The immortality of the soul and the future life.) Naples: Contessa, 1932. Pp. 40.—The study of these two metaphysical problems, which have always worried the human mind, offers in addition a psychological interest in what is said as to the power of the soul and its connection with the body, which connection is destined to be dissolved after death. Andreucci passes in review the opinions of the most eminent thinkers, poets, and jurists from antiquity to the present, concluding that the soul is an object for scientific research, that science is eternal, and that the permanence of truth assures the permanence of the soul. Belief in the survival of the soul is for us consolation and solace; lack of this faith plunges us into sadness and we are led astray.—V. D'Agostino (Turin).

3420. Andreucci, T. *Poche parole sulla vita umana.* (A few words about human life.) Naples: Contessa, 1931. Pp. 12.—The author briefly describes the human being during the various periods of his painful existence, beginning with the age at which the conscience begins to be formed. He shows how the true life may be the life in an idea which justifies existence in glorifying it. In the face of all the material forces the will is the great spiritual force which must conquer; in the will the soul expresses its power and by means of it man always proposes to himself to gain new ends.—V. D'Agostino (Turin).

3421. [Anon.] *Inhaltsverzeichnis zu den in Band 1 bis 50 veröffentlichten Originalabhandlungen.* (Index to original papers in Volumes 1-50.) *Biol. Zentbl.*, 1931, 51. Pp. 80.—An author index covering the period from 1881 through 1930.—E. R. Hülgaard (Yale).

3422. Bianquis, G. *Nietzsche, sa vie et sa pensée.* (D'après M. Charles Andler.) (Nietzsche's life and thought according to M. Charles Andler.) *J. de psychol.*, 1932, 29, 146-153.—N. L. Munn (Pittsburgh).

3423. Dolgolev, L. N. [Apparatus for the investigation of fitness for professional drivers.] *Psikhotekhn. i psikhofiziol. truda*, 1931, Nos. 2-3, 156-166.—The special characteristic of the profession of driver which was taken into consideration in building this apparatus was the simultaneous grasping of the complex of stimuli, as well as selection from among them. The experiment as published makes a detailed study of the test possible.—A. Yarmolenko (Leningrad).

3424. Falankin, A. *Poworot na psichologicheskome fronte.* (The change on the psychological front.) Moscow: Soetskiz, 1931. Pp. 32.—The article contains a summary of the discussion in connection with

the struggle for building up psychology on the basis of Marxian-Leninian dialecticism. The question of the part of psychology in socialistic construction, the object of psychology, and the place of psychology in the field of psychoneurology is discussed.—A. Yarmolenko (Leningrad).

3425. Fernberger, S. W. *The American Psychological Association: a historical summary, 1892-1930.* *Psychol. Bull.*, 1932, 29, 1-89.—The Association was founded in 1892 at Clark University, electing 31 members. Since then the increase in membership has been rapid and steady, and there has appeared a gradual change of emphasis from academic position to research contribution, with increasingly higher requirements. Since creation of the grade of associate in 1925, elections to this grade have been still more rapid. The first constitution was adopted in 1894, a certificate of incorporation in the District of Columbia recorded, and a complete set of by-laws adopted the same year, all three being here reprinted. The Council has always been the executive body of the Association, and within recent years the Secretary has become the real executive officer. Clinical psychology has been recognized since 1895, when a committee was organized and later reported a series of tests for general use. The section of clinical psychologists started in 1919 continues active, though the certification of consulting psychologists has been abandoned. The scientific programs are analyzed to show the contributing institutions, the fields of psychology represented, symposia and round tables, presidential addresses, etc. One of the things done well by the Association has been the acquiring and maintaining of seven journals, covering practically the entire psychological field. Notes on various committees, a list of the officers of the Association, and analyses of the presidents by birthplace, degrees, etc., and other miscellaneous matters, are included.—J. F. Dashiell (North Carolina).

3426. Goetsch, W., & Hellmich, W. *Feldtheorie, Gradientlehre, und relative Determination.* (Field theory, gradient doctrine, and relative determination.) *Biol. Zentbl.*, 1931, 51, 373-378.—A discussion of the theories of Child, Spemann, and others, in relation to the authors' regeneration experiments. 30 references.—E. R. Hülgaard (Yale).

3427. Gregg, P. M. *Materializing the ghost of Köhler's Gestalt psychology.* *Psychol. Rev.*, 1932, 39, 256-270.—The concept of Gestalt is examined in the light of the motor theory of consciousness, particularly as advanced by Washburn. It is defined in terms of that theory as "a consciousness (mainly kinesthetic) of an adequate incipient motor response to a situation." More specifically it is a percept or

concept. The former is defined in motor terms as a mental state resulting from the arousal of the appropriate incipient motor attitudes toward a particular object; while the latter is the mental state resulting from the arousal of the common elements of incipient motor attitudes appropriate to the individuals of a class or group. A Gestalt is translated into "an equilibrium of tentative motor adjustments or initial excitations of movement systems."—A. G. Bills (Chicago).

3428. Hugon, P. D. *Sausage-machine psychology. Writers' Markets and Methods*, 1932 (May-June), 11-12.—The author attacks atomistic psychology as taught in American colleges, citing as examples Thorndike's conclusions on adult language learning and Watson's on graphology.—R. R. Willoughby (Clark).

3429. Irwin, O. C. The organismic hypothesis and differentiation of behavior. II. The reflex arc concept. *Psychol. Rev.*, 1932, 39, 189-202.—Having previously attacked the traditional cell and neuron theories as instances of biological atomism, the author now attacks the reflex arc concept on the same ground. Evidence from the work of Child, Coghill, Langworthy, Lashley, Tracy, and from Minkowski on the human fetus and Sherman on new-born infants, favors an organismic formulation. It is suggested that as in *Amblystoma* and other lower forms the discrete reflex comes relatively late in ontogeny and develops out of a more primitive mass action, so in humans it appears very late in the uterine and post-natal development of the organism as a specialization of generalized functions which are already present. Hence the physiological reflex cannot be the elementary unit on which nervous function and the integration of behavior are built. The early mass activity points to an organismic rather than a chain-reflex type of behavior.—A. G. Bills (Chicago).

3430. Kirkpatrick, E. A. *The sciences of man in the making; an orientation book*. New York: Harcourt, Brace, 1932. Pp. xv + 396. \$4.00.—Without the use of extended description, exact definition, or technical terms, the author attempts to give a fairly clear concept of each of the sciences relating to man and his place in nature. Chapters deal with the nature and methods of science; man as an inhabitant of the earth; varieties of the human species and their modes of living, or anthropology and ethnology; how life is preserved, or physiology and hygiene; improving the human species, or eugenics and eugenics; avoiding waste, or economics; means of control, or political science; how man behaves, or general psychology; personality differences, or individual psychology (personality and mental hygiene); behavior in relation to others, or social psychology; organized group living, or sociology; changing human beings, or education; man and the unseen world, or religion; regulation of human interaction, or morals; and finally, man, the master of life, developing a science of ethical living. To every chapter is appended a couple of summaries of selected researches from recent scientific literature, and a short list of

suggested readings. The book is intended for use by interested persons whether in or outside of institutions of learning. The style is simple and clear; the treatment factual. The author hopes that the chapters on the relations of science to ethics and religion will assist in orienting readers who are questioning whether conflict is inevitable.—O. L. Harvey (Cambridge, Mass.).

3431. Kuhlmann, F. Certification of psychometrists. *Psychol. Exchange*, 1932, 1, 11-15.—Of 47 replies from 50 A. P. A. members, two-thirds favored certification, as making for higher standards and for distinction between psychometrists and clinical psychologists. Objections were received to dignifying the mere mental tester in this way.—J. F. Dashiell (North Carolina).

3432. McGlone, B. Max von Frey. *Scient. Mo.*, 1932, 34, 479.—A sketch of his life, emphasizing his contributions to the study of cutaneous sensations.—J. F. Dashiell (North Carolina).

3433. Muensinger, K. F., & Walz, P. O. An analysis of the electrical stimulus producing a shock. *J. Comp. Psychol.*, 1932, 13, 157-171.—Optimum shocks were obtained by the use of a particular amplitude when the rate of growth of the current, the period of excitation, and the refractory phase were considered. "It is suggested that the standard stimulus for administering electrical shocks be indicated by the amplitude of a direct current impulse in which the growth from zero to maximum intensity is not larger than $(2 \log i + 1)/46$ seconds (i = maximum current in milliamperes) and in which the beginning of the make is separated from the beginning of the succeeding break by not less than 1/100 of a second and from the preceding break by not less than 1/25 of a second."—N. L. Munn (Pittsburgh).

3434. Papanti, L. *Il contributo di medicina del lavoro nella medicina civile di Francesco Puccinetti*. (The contribution to industrial medicine in the civil medicine of Francesco Puccinetti.) Cingoli: Luchetti, 1932.—The author concerns himself with Francesco Puccinetti, who in the year 1838 was called to Pisa to teach in the university there in the "institute of theoretical medicine." Puccinetti was not only a forerunner and early champion of modern industrial hygiene and industrial medicine, but also a defender of the dignity of labor. He wished to preserve life for labor and to make labor unharmed to life (and gave many proposals, observations, and suggestions along this line); he wished, however, at the same time to establish the building of character along with bodily health.—F. Banisconi (Rome).

3435. Phillips, D. E. What is scientific? *J. Educ. Psychol.*, 1932, 23, 299-308.—"The object of this discussion is to suggest some degree of tolerance among scientists."—J. A. McGeoch (Missouri).

3436. Robinson, E. S. *Association theory today*. New York: Century, 1932. Pp. viii + 142. \$1.50.—The author develops a comprehensive analysis of the systematic aspects of the doctrine of association,

assuming that association may mean simply "the establishment of functional relations among psychological activities and states in the course of individual experience," and contrasting association with the doctrine of conditioned reflexes as this latter point of view is usually interpreted. The author points out the confusion which often exists, when the laws of association are considered, between laws of recall and laws of fixation. He criticizes recent experimental work which would deny validity to such laws as frequency on the basis that mere frequency will not explain the results of the experiment. With reference to the specific laws of association, the author writes, "The laws of contiguity, of assimilation, of frequency, of duration, of context, have turned up so persistently in psychological writings that we may be confident of the importance of the factors that they indicate." To these Robinson would add laws of acquaintance, composition, and individual differences. "It has been the purpose of the present essay to establish the fact that there is a tenable theory of association which is not a philosophy of mind, but which is a fruitful conception with definite indications for further experimentation and clearer definition."—W. S. Hunter (Clark).

3437. Sintvarev, V. S. [The auditory board.] *Psikhotehn. i psikhofiziol. truda*, 1931, Nos. 2-3, 151-155.—A special apparatus, called the auditory board, was constructed for investigating ability to distinguish and localize separate sounds at different intensity, timbre and frequency. An index of auditory ability could thus be obtained.—A. Yarmolenko (Leningrad).

3438. Spence, K. W. The reliability of the maze and methods of its determination. *Comp. Psychol. Monog.*, 1932, 8. Pp. 45.—A study of the reliability of a high-relief finger maze with a multiple-T pattern. Correlation of the blinds of the first half with the blinds of the second half and correlation of the results on two mazes are regarded as the most valid techniques for the determination of maze reliability. Correlation of odd versus even trials "tends decidedly to over-estimate the reliability of the maze, due to the fact that there is a correlation between the errors of measurement in the two series of trials." Odd versus even blinds are likewise invalid. Correlation of first and second halves "tends to give too high a coefficient if the two halves of the learning curve measure the same function and too low if they do not." The reliability of the high-relief mazes used in this study ranged from .60 to .84. Trial score is the most unreliable maze measure. Error scores are considered slightly less reliable than time scores. Bibliography of 32 titles.—N. L. Munn (Pittsburgh).

3439. Velikovsky, I. Ueber die Energetik der Psyche und die physikalische Existenz der Gedankenwelt. Ein Beitrag zur Psychologie des gesunden und somnambulen Zustandes. (The transformations of psychic energy and the physical existence of the world of thought. A contribution to the psychology of the normal and somnambulistic conditions.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1931, 133,

422-437.—Velikovsky first develops the thesis that every kind of energy, even the cosmic, can be perceived by us only through transformation by our paths of nerve conduction (nerve energy). Obviously, we can perceive only a section of the energies actually existing, although by means of artificial transformers we can widen the sphere of awareness. The boundaries of sensory awareness differ widely in different living creatures. Nerve energy is transformed into psychic energy. The process of thinking is the formation of a new kind of energy, a transformation within the brain cells. Hence, a thought has physical existence, and according to this theory, a sunbeam imagined is as objectively existent as one seen. If thoughts are existent in the sense of this psychic form of energy, then an explanation for telepathy follows. Velikovsky postulates a continuous cosmic radiation, which is interrupted only in the same way as a Morse apparatus. Then, one may ask: why is telepathy not a general phenomenon, and what hinders the continuous reception of the psychic energy of a second subject? The reason may lie in a difference in the kind or in the penetrating power of the psychic energy. This power appears to increase with emotional tension. Another hypothesis is that psychic energies may be received through the subconscious, and contact between the subconscious and the conscious is possible only under special conditions. It might be assumed that ontogenetically the condition of psychic separation of the individual from others represents a highly complicated and very late stage of development, while continuous psychic communication and connection is the true primeval form. As examples of such telepathy, the author gives carrier pigeons, the migration of young birds to the home land of their parents, and the cooperation of ants and bees. Related to this theory are the problems of mass psychology, which the author does not consider completely solved by the phenomena of imitation and suggestion. He defines a trance as "a condition in which the somnambulist bars himself from all sensory stimuli, and thus reverts to the atavistic stage before the development of sense organs, thereby attaining the atavistic ability to receive stimuli directly." Through the theory of the transformation of energies, Velikovsky explains spiritualistic materializations. If light energy can be transformed into psychic energy, he argues, why should one exclude offhand the possibility that psychic energy can make a reverse transformation? In the last section the author develops an entirely physical theory of thought, according to which he considers the thought engrams as the consequences of intermolecular processes in the brain cells. Memory is explained thus: a new engram allows the similar engrams already present to radiate more strongly through the psychic energy streaming from it (physical basis of association). From this viewpoint he speculates further on telepathy; why could not the engrams in other brains be receivers for the streaming nerve-energy? He closes with considerations as

to how complicated thought processes might be transferred by means of the energy, and comes to the conclusion that telepathy is not related to any primitive form of communication.—R. Krauss (Berlin).

3440. Zeise, L. *Ein Beitrag zur Lehre von der Zeitanschauung*. (A contribution to the theory of time.) Nürnberg: Geier, 1930. Pp. 50.—With the development of modern psychology the problem of the time concept increases in scope and depth. Since Kant the controversy has been chiefly in regard to empiricism versus nativism. Here the simple objective time concept, the origin of which is in question, is based on psychic relationships. First a qualitative analysis of the consciousness of time is brought forward. This involves almost all the questions which relate to the structure of human consciousness up to the fundamental act-content problem, which is reflected in the distinction between present and time-ness. The manifold meanings are essentially manifold ideas of the present, of which there are six chief forms in the literature: the mathematical moment, the psychological moment, "the real present" (Schmied-Kowarszik), the "apparent present" (James), the "present-ness" (Husserl), the "content of the time-place relationships" (Stern). The processes of time and the present cross in consciousness. Each requires the unification, limitation and sequence of the thought content, which effects its actuality and unity in an unreasoning time-free form. Consciousness exists and is aware of itself as a single actuality, i.e., in the form of the present, and at the same time is aware of the natural givenness of the content in extent and sequence of time. In so far as consciousness is bound to the thought data it appears to itself as broken up into single acts in time, while these appear to consciousness as the present. The work contains a review of the literature.—L. Zeise (Munich).

SENSATION AND PERCEPTION

3441. Békésy, G. v. *Sur la théorie de l'audition*. (On the theory of audition.) *Année psychol.*, 1930, 31, 63-96.—The author gives a brief review of the auditory theories of Helmholtz, Ewald, Hurst, Ter Kuile, Meyer, and Bonner, and then proceeds to describe his own observations upon models of the ear which he has constructed. Diagrams of the models and photographs of the movements of particles in the fluid within the canals of the models are presented. In some cases the observations of former experimenters have not been confirmed. The author also discusses at some length the distribution of the excitation over the basilar membrane.—E. H. Kemp (Clark).

3442. Outaforth, T. D. *The unreality of words to the blind*. *Teachers Forum (Blind)*, 1932, 4, 86-89.—A study was made upon 39 totally blind pupils, ranging in age from 9 to 21, and in IQ from 60 to 134, to discover the individual differences between the congenitally and adventitiously blind in the tendency toward verbal-mindedness. Each subject was asked to respond to the names of 40 objects by giving

some quality of each object named. Of the 1560 responses named, the adventitious group gave 65% visual responses and 24.2% tactual responses, and the congenital group gave 48.2% visual responses and 35.7% tactual responses. In both groups color responses far outnumbered visual responses not involving color. There were remarkably few auditory, taste, and smell responses.—S. D. Robbins (Boston).

3443. Deshayes, M. L. *L'éventail magique*. (The magic fan.) *J. de psychol.*, 1932, 29, 310-318.—A discussion of visual illusions in terms of pseudoperspective.—N. L. Munn (Pittsburgh).

3444. Enroth, E. *Iritis rheumatica und das Wetter*. (Rheumatic iritis and the weather.) *Acta Ophth.*, 1932, 10, 146-150.—The days of the onset of iritis rheumatica in 197 patients in Helsingfors were graphed for each year from 1922-1930. The disease first became noticeable on certain days, i.e., there were many days on which two or more cases appeared, although most of the days were free of such onsets. It was thought that the weather might be responsible. However, no correlation could be found between the onset of the disease and such ordinary items of the weather as wind, temperature, clouds, and air pressure. The weather conditions preceding the focal points for about a week were then studied. Sudden changes in temperature are common in Helsingfors, due to cyclones caused by the cold polar winds and the hot tropic winds coming together. The onset of rheumatic iritis was found to be most frequent in certain phases of these cyclonic changes. It was suggested that electrical changes in the atmosphere might have something to do with it, although the cause cannot be said to be known.—M. B. Mitchell (George School, Pa.).

3445. Erschowitz, N. *Die psychotechnische Augenmaassprüfung und ihre Bedeutung für die Prüfpraxis*. (The psychotechnical testing of visual estimation and its significance for testing practice.) *Indus. Psychotechn.*, 1932, 9, 33-50.—45 adult subjects were required to take 27 different visual judgment tests, which consisted of combinations of bisected lines, angles, and parallelograms. The intercorrelations of the different tests were from —.12 to .57, the highest being for judging lines in horizontal and in vertical position. In order to compare visual judgment with general intelligence, the author correlated visual judgment with simple manual ability, attention, memory, logical thinking, space perception and practical thinking. These correlations varied from —.05 to .57, and seem to indicate that there are kinds of visual judgment tests in which manual dexterity is an important factor, while for others general intelligence, either practical or abstract, is most important. Finally, the author discusses the importance of visual judgment tests as aids in psychotechnical studies and suggests that the ability to make visual judgments frequently cannot be separated from general intelligence. Low intelligence may cause difficulty in following instructions, while high intelligence may cover up poor visual estimation. Hence visual judgment tests are not

very diagnostic. If, however, one should still want to use these tests, the number of them may be reduced to a minimum, because all visual judgment may be reduced to judgments of size, parallelism, distance, and angularity.—*C. Burri* (Chicago).

3446. Freeman, E. Anomalies of visual acuity in relation to stimulus-distance. *J. Opt. Soc. Amer.*, 1932, 22, 285-292.—The anomaly, previously studied (IV: 51, IV: 3790, V: 3019), consists in the fact that acuities measured in terms of minimum separable or of minimum visible are greater for large (300 cm.) than for small (30 cm.) stimulus-distances. It is shown experimentally that the anomaly may not be attributed to such "psychological" factors as apparent magnitude and awareness of the actual distance of the stimulus; or to differences in pupillary width; or to differences in lenticular thickness which arise from accommodation. The anomaly occurs with light-adaptation as well as with dark-adaptation.—*D. B. Judd* (Bureau of Standards).

3447. Gamble, E. A. McC. The psychology of taste and smell. *Psychol. Bull.*, 1932, 29, 249-259.—A review of 31 titles, including studies of conscious experiences in smelling olfactory qualities, pleasantness-unpleasantness in smell and in taste, taste mixture, compensation and adaptation, smell and taste in animals, etc.—*J. F. Dashiell* (North Carolina).

3448. Graham, C. H. A study of the rôle of inhibition in color contrast. *Amer. J. Physiol.*, 1932, 101, 43.—It has been possible to study the retinal interaction in response to various wave lengths by using the fusion frequency of flickering light as an index of excitation. Under these conditions it is found that two flickering semi-circles which have the same spectral distribution and the same intensity of illumination have a higher fusion frequency than one alone. The results are different when two flickering patches of different colors are used. For example, a red semi-circle and a blue semi-circle originally, at the same fusion frequency, give under these conditions a fusion point which is no higher than that of either when viewed alone.—*C. Landis* (N. Y. Psychiatric Institute).

3449. Griffith, C. R. The perceptions and mechanisms of vestibular equilibration. *Psychol. Bull.*, 1932, 29, 279-303.—132 papers are reviewed in some detail. They include: general surveys; apparatus and methods of stimulating, including rotational, surgical, galvanic, caloric, pressure, and drugs; perceptual functions, as auditory localization and perception of movements; modes of response, as ocular, general tonus, and postural reflexes; anatomical and physiological, the functions of the otoliths and of eye muscles; clinical and pathological studies of hereditary factors, syndromes, and special factors such as encephalitis.—*J. F. Dashiell* (North Carolina).

3450. Guild, S. R. Correlations of histologic observations and the acuity of hearing. *Acta otolaryngol.*, 1932, 17, 207-249.—Three conditions must be met in order to produce dependable results in

correlating histological observations with acuity of hearing. In the first place, there must be an accurate test for the functioning of the auditory apparatus. It has been very difficult to keep the stimuli constant or comparable when tuning forks or different makes of audiometers have been used. A standard examination should be established. Second, there should be good histological material. The whole auditory mechanism should be preserved. Great difficulty arises here from the fact that what may be the best technique in preparing one kind of material in a section may be very bad for other kinds of material. In the third place, sampling errors should be avoided. Many illustrations are given to show the wide range of the normal structures as well as of the pathological.—*M. B. Mitchell* (George School, Pa.).

3451. Hecht, S., Wald, G., & Haig, C. The dark adaptation of different retinal areas. *Amer. J. Physiol.*, 1932, 101, 52.—The decrease in threshold which the eye shows during dark adaptation proceeds in two sections, sharply separable in time and characteristics. The first ends in about 3 minutes, during which the threshold drops to about 1/50th of its initial value. The second part then begins and terminates in about 30 minutes, during which the threshold drops to about 1/50,000 of its initial value. The first part is probably determined by the cones, the second by the rods.—*C. Landis* (N. Y. Psychiatric Institute).

3452. Leiri, F. Sur le ton propre de l'oreille. (The characteristic tone of the ear.) *Acta otolaryngol.*, 1932, 17, 249-260.—The author believes that the characteristic tone of the ear is dependent, not on the bones of the middle ear, but on the cochlea of the inner ear.—*M. B. Mitchell* (George School, Pa.).

3453. Merry, F. K. A further investigation to determine the value of embossed pictures for blind children. *Teachers Forum (Blind)*, 1932, 4, 96-99.—49 blind boys and 49 blind girls, ranging in age from 6 to 24, and in IQ from 61 to 146, were asked to name bi-dimensional embossed designs of 5 objects, and a similar group were asked to name 10 embossed pictures primarily of a tri-dimensional nature. The ability of blind children to recognize factually simple designs and pictures was found to be very limited. Intelligence, chronological age, and the age at which vision was lost had no appreciable effect upon the scores made. Bi-dimensional designs were recognized more successfully than tri-dimensional pictures of objects wherein perspective is involved. Those who responded most quickly made the best scores.—*S. D. Robbins* (Boston).

3454. Neuhaus, W. Taktile Scheinbewegung. (Tactual illusions of movement.) *Arch. f. d. ges. Psychol.*, 1932, 83, 519-562.—The investigation was undertaken to determine the rôle played by the time interval between applications, the distance between points of application and the duration of application in tactual illusions of movement. Experimental

results indicate that: (1) the illusory movement occurs for any time interval from 0s to 500s; (2) if the temporal interval is progressively shortened the distance between the points stimulated must also be shortened to obtain the illusion; (3) with a constant distance and temporal interval the illusion is most clearly observed when the duration of application of the stimulus is short or long. Although there are some individual differences (some subjects failing at all times to report the illusion) practice results in the following steps from clear succession to clear movement: two points stimulated in succession, two points connected by an arc of a circle in the air, a plane surface, an ellipse, a straight line, illusory movement. The direction of movement within certain temporal limits is a function of the individual's attitude. Speed of apparent movement is proportional to the temporal interval. A tabular presentation of the points of similarity and difference between visual illusions of movement and tactual illusions of movement is given. The theoretical implications of the experimental findings are indicated. In general the physiological theories of Gestalt psychology are rejected in favor of a strictly psychological theory.—R. H. Waters (Arkansas).

3455. Ohwaki, J. Über die sensorische Volum-Einstellung. (On the sensory idea of volume.) *Arch. f. d. ges. Psychol.*, 1932, 83, 563-608.—An experimental study of the effect of training in the size-weight illusion upon judgments in lifted-weight experiments. It is found that such training causes an increase in the frequency with which the second weight is judged heavier and a corresponding decrease in the frequency with which the first is judged heavier. Several variations of experimental method yield much the same type of results.—R. H. Waters (Arkansas).

3456. Ovio, G. Malattie e traumatismi degli occhi in rapporto al lavoro. (Maladies and wounds of the eyes with respect to work.) *Rass. di med. appl.*, 1932, 3, 81-93.—After establishing more favorable physiological conditions for visual work (reading) than we ordinarily have, and examining different accidents to the eyes, such as the introduction of foreign bodies, burns, wounds, etc., the author affirms that although the visual capacity may be above average, the diminution following such accidents is proportional to the preceding condition of the vision. We may lose three-tenths of our visual power without a great loss in working efficiency, but in this condition the individual is in a dangerous state of unstable equilibrium.—R. Calabresi (Rome).

3457. Roaf, H. E. Adaptation to light. *J. Physiol.*, 1931, 71, xiii-xiv.—A study of the principal factors involved in determining differences in perception of light. The factors are alteration in size of pupil (controlled by an artificial pupil), spread of effect from one part of the retina to another, local photochemical interference, and central inhibition.—H. Hoagland (Clark).

3458. Tansley, R. Regeneration of visual purple. *J. Physiol.*, 1931, 71, 442-458.—The course of re-

generation of visual purple in the rat was followed by extracting it from retinæ at various stages of dark adaptations with digitonin. A comparison of the regeneration curves for normal and vitamin-A-deficient rats is made, since vitamin A deficiency is thought to be the principal cause of night blindness. The vitamin-A-deficient rats regenerate visual purple much more slowly than normal controls. The relation between the normal regeneration curve of visual purple and the dark adaptation of the human eye is discussed, together with a possible chemical mechanism.—H. Hoagland (Clark).

3459. Zigler, M. J. Touch and kinesthesia. *Psychol. Bull.*, 1932, 29, 260-278.—A review of 70 articles under many heads that may be grouped as follows: physiological—excitation and discharge of sensory impulses, drug effects, protopathic-epieritic, autonomic system; qualitative analysis and relations to sense organs for temperature, tickle, pain, and sense of vibration; perceptual—size-weight illusion, space, movement, lifted weights; pressure and affection.—J. F. Dashiell (North Carolina).

[See also abstracts 3432, 3437, 3470, 3471, 3474, 3481, 3515, 3534, 3535, 3540, 3549, 3562, 3563, 3568, 3594, 3679, 3680, 3682, 3692, 3700, 3730, 3796.]

FEELING AND EMOTION

3460. Jenness, A. The recognition of facial expressions of emotion. *Psychol. Bull.*, 1932, 29, 324-350.—A review of the historical and contemporary literature, under the heads: analyses and portrayals of facial expression, the question of innate patterns, facial patterns in infants, the question of innate ability to recognize expressions, effects of training in recognition, effects of suggesting names, range of ability to recognize, sex differences in recognizing, relationship of ability to judge expressions to general intelligence and to social intelligence, identifiability of different patterns, problem of most important features, methods of identification. In general, it appears that little real progress has been made in reaching a definite solution of any major problem in this field.—J. F. Dashiell (North Carolina).

3461. King, L. S. Discussion of "the adrenal cortex and emotion." *Psychol. Rev.*, 1932, 39, 289-291.—It is argued that the hypothesis of Hollingshead and Barton concerning the adrenal cortex and emotion does not follow from the grounds on which it is based; that it is rendered improbable by other relevant data not considered by the authors; and that no valid evidence in its support has yet been adduced.—A. G. Bills (Chicago).

[See also abstracts 3512, 3722.]

ATTENTION, MEMORY AND THOUGHT

3462. Biagieleisen, B. Analiza uwagi w świetle badań psychologicznych. (Analysis of attention in the light of psychological tests.) *Kwart. psychol.*, 1932, 3, 31-83.—A battery of tests of attention (Bourdon, Poppelreuter, Piorkowski and the author).

and of intelligence (Stanford revision, Otis and the author) were given to normal and abnormal children and to adults. In all cases the coefficients of correlation between these two groups of tests were low and insignificant. Furthermore, the intercorrelations between the various tests of attention were low, showing that the tasks required other modes of psychological functioning than that of attention. The author is opposed to the school of Kroh (especially Vollmer), who claims that on the basis of tests of attention certain definite character types are revealed. The author found rather a far richer variety of types.—T. M. Abel (Sarah Lawrence).

3463. Klüver, H. Eidetic phenomena. *Psychol. Bull.*, 1932, 29, 181-203.—A review of 127 titles. During recent years the majority of investigators have been more interested in eidetic images as indicators of personality trends than in eidetic imagery itself. Studies have been made of perceptual, imaginal, etc., functions in adults in the light of facts previously arrived at by eidetic research on children; and the distinction between "integrated" and "non-integrated" types has frequently been a central one. Correlations and relationships have been studied between EI, on the one hand, and intelligence, art, education, AI and MI, Purkinje phenomenon, and capillaroscopy. The reviewer criticizes group examinations in favor of individual ones.—J. F. Dashiell (North Carolina).

3464. Lepley, W. M. A theory of serial learning and forgetting based upon conditioned reflex principles. *Psychol. Rev.*, 1932, 39, 279-288.—The author aims to relate the phenomena of conditioned reflexes to the phenomena of habit formation. He presents a theory of forgetting based on conditioned reflexes, with the following assumptions: (1) remote forward associations are delayed conditioned reflexes; (2) they are extinguished, or established as delayed conditioned excitatory tendencies, during learning; (3) they recover spontaneously from inhibition and cause conflict with immediate associations after a short period of forgetting, thus explaining the rapid initial drop in the forgetting curve; and (4) being weakly formed, they drop out, leaving the immediate associations free, thus accounting for the negative acceleration of the lower end of the forgetting curve.—A. G. Bills (Chicago).

3465. Poppelreuter, W. Die methodische Rolle der "determinierenden Tendenzen" bei Begnützungsexperimenten. (The methodological rôle of the determining tendency in experiments on judging.) *Arch. f. d. ges. Psychol.*, 1932, 83, 385-395.—A theoretical discussion of the various ways in which determining tendencies may influence an individual's performance and the cautions needed in the interpretation of such performances.—R. H. Waters (Arkansas).

3466. Roels, F., & Van Kessel, H. The differential diagnostical value of some complex-symptoms in free associative reactions. *Kwart. psychol.*, 1932, 3, 9-30.—This investigation differs from many others

made with relation to the diagnostic importance of complex-symptoms in that it tried to ascertain the differential diagnostic value of the symptoms of lengthening of reaction times, wrong reproductions, and lengthening of reproduction time for critical stimulus words. It was found that the difference between the reaction times of critical and non-critical stimulus words had particular diagnostic value and even differential diagnostic value for three groups of subjects, viz., those who had actually witnessed the complex-experience (the staged capturing of a bicycle thief), those who had been merely told of the complex-experience, and those who were ignorant of the situation. It was not possible, however, to determine with any degree of certainty whether a complex is active in a given individual or whether his reactions are to be ascribed to a witnessing of the experiences relating to the complex or to mere report of them.—T. M. Abel (Sarah Lawrence).

3467. Schröter, H. Über die Perseveration von Vorstellungen. (On the perseveration of ideas.) *Arch. f. d. ges. Psychol.*, 1932, 83, 289-324.—In a series of experiments in which are presented (1) pairs of nonsense syllables, (2) pairs consisting of nonsense figures and syllables, and (3) figures alone with the instruction to give the first nonsense syllable thought of, it is found that there is a general tendency for the syllables from the first set presented to be given by the subjects. The technique of the several experiments demonstrates that this perseverative tendency is disturbed by the set and attitude of the subject.—R. H. Waters (Arkansas).

3468. Wallon, H. De l'expérience concrète à la notion de causalité et à la représentation-symbole. (A propos d'un livre récent.) (From concrete experience to the idea of causality and to symbolic representation. Comments on a recent book.) *J. de psychol.*, 1932, 29, 112-145.—A critical commentary on Levy-Bruhl's *Le Surnaturel et la Nature dans la Mentalité Primitive*.—N. L. Munn (Pittsburgh).

[See also abstracts 3436, 3438, 3561, 3697, 3724.]

NERVOUS SYSTEM

3469. Barnes, T. C. Impulses in crustacean nerve associated with pressure stimulation. *J. Physiol.*, 1931, 71, xii-xiii.—Electrical responses from afferent nerves from the legs and claws of crabs and lobsters were recorded with oscillograph and loud speaker. Bending the joints of walking limbs produces impulses from the entire nerve at a maximal frequency of 90 per second. Adaptation is very rapid, which helps explain the fact that proprioceptively controlled geotropic orientation occurs only during active progression, as has been shown by Crosier and Kropp. The dactylopodite of *Cancer pagurus* has five distinct rows of hairs on its surface. The innervation of these rows of hairs was worked out by recording discharges in different nerve strands supplying the hair pads.—H. Hoagland (Clark).

3470. Bartley, S. H. Analysis of the cortical response to stimulation of the optic nerve. *Amer. J. Physiol.*, 1932, 101, 4-5.—Records of the apparently spontaneous action potentials taken from the cortex of the brain are probably due to action of cells rather than of fibers. The record from any one point is complex, and involves the superposition of simpler rhythmic responses of several groups of cells.—C. Landis (N. Y. Psychiatric Institute).

3471. Bishop, G. H. Certain time-relations of the visual pathway. *Amer. J. Physiol.*, 1932, 101, 8-9.—On direct stimulation of the optic nerve of the rabbit by single shocks, the first action potential wave from the cortex appears after an interval of from 4 to 25 sigma, depending upon the strength of the stimulus and the momentary state of the cortex. The findings suggest that the effects of peripheral stimuli reaching the cortex involve not only the specific activity of its cells induced by the apparent impulse but the alteration of the spontaneous activity already going on in the cortex. The conditions of stimulation in this experiment do not duplicate the effects of light stimuli on the retina. The latter process presumably results in repetitive stimulation of the optic nerve fibers and results in an action potential wave more difficult to analyze.—C. Landis (N. Y. Psychiatric Institute).

3472. Canella, M. P. Sistema nervoso e organi. (The nervous system and the organs.) *Riv. di psicol.*, 1931, 27, 200-215; 242-266.—A review of the development and rôle of the nervous system in the evolutionary series. The nervous system reacts as does any other organ of the body. The same cellular phenomena occur in whichever way the interaction between mind and body goes on. The distinction between a neuro-vegetative system and a cerebrospinal system that presides over the life of relation is a purely arbitrary division, for anatomically and physiologically the two systems are in a narrow reciprocal dependence, really constituting a unified system.—T. M. Abel (Sarah Lawrence).

3473. Clementi, A. Stricnizzazione circoscritta del lobo piriforme del cervello del cane ed epilessia riflessa da stimoli odoriferi. (Strychnization limited to the pyriform lobe of the brain and reflex epilepsy by olfactory stimulation.) *Arch. ital. fisiol.*, 1931, 30, 1-31.—The author has previously conducted analogous researches with the visual and auditory regions of the cerebral cortex. He finds that we may compare the action of the olfactory center (which he proposes to call the diosmic mechanism) with the dioptic and diotic mechanisms which preside over the reception of luminous and acoustic stimulation; he establishes a difference between the centers of the higher sensory regions (visual, auditory, olfactory), which he proposes to call sensori-motor, and the sensitive-motor centers of the sigmoid region: the former are less sensitive to faradic stimulation and their strychnization provokes reflex epilepsy only in connection with specific sensory stimulation, not with cutaneous stimulation of corresponding organs. The paroxysms of reflex epi-

lepsy are in general limited to the muscles of the head, but they may involve the whole organism; they always begin with deep breathing movements on the side of the strychninized hemisphere.—R. Calabresi (Rome).

3474. Davis, H., & Saul, L. J. The frequency of impulses in the auditory pathways. *Amer. J. Physiol.*, 1932, 101, 28-29.—Electrical auditory responses have been traced from the eighth nerve to the auditory radiations. These responses, when amplified, reproduce in telephone receivers the sounds applied to the cat's ear. At least two effects must be distinguished—the true nerve action currents and an electrical "spread" from the regions of the cochlea. The spread is diffuse. It can be picked up from any tissue of the head. Action currents are sharply localized in the auditory tracts. Musical notes of moderate intensity are most clearly recovered from the central tracts at frequencies between 200 and 1,000 per sec. Words spoken into the cat's ear are unintelligible unless action currents are reinforced by the "spread." It is tentatively concluded that the highest frequency of nerve impulses in the fibers of the auditory pathways does not exceed 1,000 per sec.—C. Landis (N. Y. Psychiatric Institute).

3475. Eccles, J. C., & Hoff, H. E. Rhythmic response of motoneurons. *J. Physiol.*, 1931, 71, xxi-xxii.—When an antidromic impulse is "backfired" into a rhythmically discharging motoneurone, Denny-Brown has shown that the next reflex discharge is set up after an interval which is longer than the interval between consecutive normal discharges. By stimulating a rhythmically discharging motor unit by a single maximal break shock applied to the intact motor nerve preliminary quantitative data have been obtained concerning the inhibitory or delay effect of the "backfire" on the rhythm of the reflex.—H. Hoagland (Clark).

3476. Fulton, J. F. Bilateral representation of the lower extremity in the motor cortex of the chimpanzee. *Amer. J. Physiol.*, 1932, 101, 36.—In the chimpanzee, ablation of the motor representation of the lower extremity in one cerebral hemisphere produced in the opposite hind extremity all the classical symptoms of monoplegia which accompany the corresponding lesions in man. When the corresponding motor representation of the second hemisphere was removed, after an interval of one to two months, the newly paralyzed limb passed into a state of profound depression of reflex activity, lasting from three to seven days in the three chimpanzees studied. These observations give functional significance to the uncrossed pyramidal pathways, and throw light on the symptoms of cerebral diplegia in man.—C. Landis (N. Y. Psychiatric Institute).

3477. Gelfan, S., & Bishop, G. H. Action potentials of single muscle fibers. *Amer. J. Physiol.*, 1932, 101, 37-38.—Previous work has shown that a single muscle fiber can be stimulated directly with micro-electrodes in contact without conduction of the

impulse along the full length of the fiber. This study investigated the question whether such shortening was accompanied by a normal action potential. With a stimulus intensity sufficient to cause only a portion of a single fiber to respond, no action potential whatever can be recorded accompanying the response. It is probable that the sub-maximal responses of the single fiber may be of the nature of brief contractions, and hence do not show the action potential which goes with contraction.—C. Landis (N. Y. Psychiatric Institute).

3478. Herren, E. Y., & Haterius, H. O. On the mechanism of certain ovarian hormonal influences on the central nervous system. *Amer. J. Physiol.*, 1932, 100, 533-536.—Experiments carried on with animals bilaterally sympathectomized at the level of the renal arteries show that certain of the influences of the ovarian hormones on the higher nervous levels are affected through sympathetic connections and are not in the nature of direct stimuli.—C. Landis (N. Y. Psychiatric Institute).

3479. Heymanovitch, A. Roslinne gittja ta nervova sistema. (Vegetative life and nervous system.) *Ukrain. psikhonevrol. instit.*, 1932, 20. Pp. 200.—This volume contains a group of articles concerning experimental and clinical investigations of the vegetative system. Questions of nerve block, vegetative innervation, the mutual influence of the brain and the vegetative organs, the biochemistry of the brain, etc., are treated.—A. Yarmolenko (Leningrad).

3480. Jasper, H., & Perkins, T. Nerve-muscle chronaxie measurements and the phi gamma curve. *Amer. J. Physiol.*, 1932, 100, 564-568.—"The constant process method and its statistical procedures were shown to be applicable to the determination of the time threshold of excitability. A study of the variability of chronaxie values showed them to be cyclic in course. Since the peripheral chronaxies have been shown to be very closely related to the activity of the entire nervous system, the cycles observed may be of basic physiological and psychological significance."—C. Landis (N. Y. Psychiatric Institute).

3481. Kaestner, E. Methodisches zur Bestimmung des Reizortes der Temperaturnerven. (Methods of determining the stimulus point of nerves of temperature.) *Zsch. f. Sinnesphysiol.*, 1931, 62, 110-131.—The situation of the end organs of the nerves of temperature sensation, their point of stimulation on the surface of the skin, has been calculated by Hahn and his collaborators as the unknown in a mathematical equation in which the temperature of the skin and of the stimulus and the coefficient of conductance of the skin were used as known quantities. Hahn's theory is based upon the assumption that the intensity of a sensation of temperature without adaptation corresponds exactly to the real temperature at the point of stimulation. The author has tried three methods of procedure and with them determined the distance of the stimulus when the

hand was covered with a rubber glove. With this experiment a check was made upon the amount of error resulting from the rubber glove, which at the same time offered a verification of the basis of the theory. Two of the methods worked satisfactorily. The third method was less accurate, yielding ten units of deviation. The theoretical bases of the errors in the mathematical items were analyzed, and it became probable that this method of localization also yielded worth-while lines of approach when the glove was not used. This work also reports systematic research on the relation between increase in the temperature of the stimulus and increase in the temperature of the skin. In this type of experiment the temperature of the blood cannot be taken into account.—E. Kaestner (Berlin).

3482. Keller, A. D. Autonomic discharges elicited by physiological stimuli in mid-brain preparations. *Amer. J. Physiol.*, 1932, 100, 576-586.—"Chronic mid-brain and pontile preparations with cats have been maintained for as long as twenty days. The cerebral hemispheres and brain-stem ahead of the section remained in normal position with intact blood supply. In these preparations normal sympathetic tone in the eyes and the typical signs of rage were readily induced by physiological stimuli." The work shows that the discharging of a typical rage response is not dependent on the brain-stem cephalad to the middle level of the mid-brain. This fact, however, does not eliminate the possibility of additional central mechanisms playing a rôle during rage in the intact animal.—C. Landis (N. Y. Psychiatric Institute).

3483. McDowell, R. J. S. Variations in the activity of the cardio-inhibitory centre. *J. Physiol.*, 1931, 71, 417-430.—The activity of the cardio-inhibitory center has been investigated by studying in different conditions the rate of the heart, the effects of stimulating the center by various means, and the effects of section of the vagi. It has been shown that sensory stimulation and asphyxia, although they accelerate the heart, abolish the cardio-inhibitory reflex, and result in a later condition in which the vagus center is more excitable and the normal vagus restraint of the heart is increased. Evidence is given which indicates that this change is due to an after-discharge and facilitation of the cardio-inhibitory center. It is suggested that the slow pulse produced by prolonged exercise and by training is similarly produced, and it is indicated that the function of the vagus is related to the adaptation of the heart to the requirements of exercise.—R. J. S. McDowell.

3484. McSwiney, B. A., & Robson, J. M. The sympathetic innervation of the stomach. II. The effect of stimulation of the peri-arterial nerves on the stomach and small intestine. *J. Physiol.*, 1931, 71, 94-200.—H. Hoagland (Clark).

3485. Paton, L. Vestibulo-ocular reflex paths. *Brit. J. Ophth.*, 1932, 16, 257-264.—This paper is an addendum to the presidential address of the author, which was published in volume 50 of the *Transactions*.

tions of the Ophthalmological Society. In the present paper the author describes the anatomical paths by which the labyrinth exercises control over the movements of the eye-balls and over the muscle tone of the whole body. The paths followed by the dorso-mesial and ventro-lateral portions of the octavo-mesencephalic tract, by the vestibular portion of the 8th nerve, and by the connections of the superior olive and the vestibular nuclei are described in detail and illustrated in 7 colored plates.—E. H. Kemp (Clark).

3486. Pennachietti, M., & Vigliani, E. O. Il valore delle misure di cronassie nei lavoratori del piombo. (The value of measurements of chronaxy in lead workers.) *Rass. di med. appl.*, 1932, 3, 100-111.—The authors report diminished chronaxies in the extensor muscles of the hand in 25 lead-founders and augmented chronaxies in 5 lead-founders. They believe that the diminished chronaxies indicate a real toxic latency of the radial nerve and should be considered as a symptom in the diagnosis of saturnism.—R. Calabresi (Rome).

3487. Pollak, S. The main afferent fiber systems of the cerebral cortex in primates. An investigation of the central portions of the somato-sensory, auditory, and visual paths of the cerebral cortex, with considerations of their normal and pathological function, based on experiments with monkeys. *Univ. Calif. Publ. Anat.*, 1932, 2. Pp. xiv + 370. \$10.00.—The author investigated intensively the problem of cortical localization. Several experiments are reported in which he interrupted the somato-sensory, auditory, and visual afferent paths at their diencephalic origin or close to it, and by tracing the secondarily degenerated afferent fibers to their respective terminations in the cortex studied the extension or boundaries of the "primary" or projection areas of the cortex, the finer relation of the afferent fibers to the cortex, and the internal arrangement of the three investigated afferent paths. The experiments were all carried out on *Macacus rhesus* monkeys except one, in which a Java monkey was used, and the histological method followed was that of Marchi. Each of the systems is treated in a separate chapter, and due consideration is taken of previous investigations. Six camera lucida drawings by the author, most of them in colors, and a bibliography of about 1000 articles are included.—E. H. Kemp (Clark).

3488. Ronzoni, E. The source of energy of nerve activity. *J. Biol. Chem.*, 1931, 92 (Proceedings), iii-iv.—"Nerve and muscle are so much alike in their physiological properties that one is inclined to look for the same mechanism in both; that is, a breakdown of creatine phosphate followed by a restoration from energy derived from lactic acid formation anaerobically and oxygen aerobically." Experimentation shows, however, that "nerve and muscle are alike in having as a source of energy for restoration both a lactic acid and an oxidation mechanism, the former predominating in muscle, the latter in nerve. The assumed oxygen reserve of nerve, for whose ex-

istence there is no conclusive evidence, would then become a creatine-phosphate reserve whose utilization during lack of oxygen can be only partly compensated by a poorly developed lactic acid mechanism too slight to measure directly."—O. L. Harvey (Cambridge).

[See also abstracts 3490, 3508, 3516, 3527, 3560, 3571.]

MOTOR PHENOMENA AND ACTION

3489. Bard, P., Brooks, C. M., & Lowry, T. Cerebral localization of "hopping" and "placing" reactions in cats, rats, and alligators. *Amer. J. Physiol.*, 1932, 101, 3-4.—The control for the "hopping" and "placing" reactions is wholly contralateral. After unilateral decortication, the placing reactions are absent and the hopping reactions absent or feeble in the contralateral legs. This normal functioning of a cortical remnant shows conclusively that the cortical representation of these reactions is strictly localized and remarkably independent of all other cortical areas in the cat. Similar operations in rats gave analogous results.—C. Landis (N. Y. Psychiatric Institute).

3490. Basett, H. C. Further experiments on chronic decerebrate cats. *Amer. J. Physiol.*, 1932, 101, 5-6.—Using a previously described method of producing and maintaining chronic decerebrate cats, it has been shown that the presence of the hypothalamus above the pituitary stalk is essential for life beyond one week. This tissue is effective in preserving life even when it has no connection with the rest of the nervous system. Its value depends on some chemical factors. Reflexes are usually brisk and more complex in the chronic than in the acute animal.—C. Landis (N. Y. Psychiatric Institute).

3491. Borchardt, L. Über Konstitution und Konstitutionsstörungen, ihre Beziehungen zur Psychologie und Psychopathologie. (On the constitution and constitutional disorders, as related to psychology and psychopathology.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1930, 125, 1-11.—The relation between the body structure and functional condition of the organs and the individual's mental condition can be reduced, for the asthenic or the pyknic type, to a single, essential basis. The asthenic and leptosomic types have organs characterized by deficient productivity, although the initial reaction would seem to be satisfactory. The organism thus becomes quickly exhausted under any prolonged strain. The same tendency toward exhaustion is shown in the affective life of these types. On the other hand, the pyknic type is characterized by a tendency towards a heightened reactivity, considered both from an organic and an affective point of view. Thus the author reveals a parallelism between the functional and the psychological life of these types.—A. B. Hunter (Clark).

3492. Dameshek, W., & Loman, J. Direct intra-arterial blood pressure readings in man. *Amer. J. Physiol.*, 1932, 101, 140-143.—The intra-arterial

(brachial) pressure in 150 individuals was determined by a direct method which was compared with the usual indirect methods. It was found that the greater the pulse pressure the less accurate was the technique used; in other words, a mean rather than a systolic pressure should be determined. The apparent discrepancy between indirect and direct blood pressure readings in certain conditions was attributed to the high pulse pressure. The direct method consisted essentially of a modified hypodermic syringe to which a sensitive manometer was attached.—*C. Landis* (N. Y. Psychiatric Institute).

3493. Downey, J. E. Back-slanted writing and sinistral tendencies. *J. Educ. Psychol.*, 1932, 23, 277-286.—"The fact that a small percentage of penmen, writing with the right hand dextral fashion, produce a back-slanted hand raises the question of the general significance of slant to the right or to the left. It is found by experiment that a great percentage of penmen slant toward the left when writing with the left hand. Also that left-handed persons writing with the right hand produce a considerable amount of back-slanted writing. It would appear that slant toward the left is, in the first instance, indicative of a tendency to move centrifugally with the left hand; in the second instance, conditioned by sinistral tendencies as was also true for many supposedly dextral individuals writing a back-slant. Crossed dextrality likewise was found to be influential in causing a reversed script." Sinistral writing or mirror writing gave a large amount of slant with the right hand.—*J. A. McGeoch* (Missouri).

3494. Downey, J. E. A note on bimanual handedness. *J. Genet. Psychol.*, 1932, 40, 210-213.—The problem of bimanual handedness deserves more consideration than it has yet received and more accurate methods of scoring. Differences of opinion on many points appear in a comparison of authorities.—*J. F. Dashiell* (North Carolina).

3495. Fairén, V. Étude de la créatine et de la créatinine dans les spasmes vasculaires du labyrinthe. (A study of creatine and creatinine in vascular spasms of the labyrinth.) *Acta oto-laryngol.*, 1932, 17, 201-207.—Measurements were made of the amount of creatine and creatinine in the blood and urine of patients suffering from tinnitus or vertigo due to vascular spasms in the anterior or posterior labyrinth. Some of the patients were also nephritic and did not respond readily to treatment. After treatment with liver extracts and insulin, the creatine and creatinine in the blood and urine were lower in most cases, and the vestibular symptoms also cleared. However, since the action of the chemicals is unknown, it may not be causal.—*M. B. Mitchell* (George School, Pa.).

3496. Gellhorn, E. Further studies in muscle fatigue and permeability. *Amer. J. Physiol.*, 1932, 100, 447-451.—It has been shown by means of indirect stimulation applied to frog muscle-nerve preparations that the permeability of the muscle tissue to

various salts is increased under physiological (nerve) stimulation.—*C. Landis* (N. Y. Psychiatric Institute).

3497. Gourewitch, M., & Ozeretaki, N. Die konstitutionellen Variationen der Psychomotorik und ihre Beziehung zum Körperbau und zum Charakter. (Constitutional variations in psychomotor capacity and their relation to the somatic constitution and to character.) *Arch. f. Psychiat. u. Neurol.*, 1930, 91, 286-318.—In order to gather material on the relationships existing between bodily constitution and character, the authors examined 8,167 persons. Only 4,858 cases were used, the others being found to belong to mixed types. Of the 3,381 men and 1,477 women retained, there were 2,218 leptosomic cases, 1,245 athletic, 928 pyknic, 155 infantile, and 312 dysplastic cases. Tables are given which indicate the relations existing between character and motor ability, between the somatic constitution and motor ability, and between bodily constitution and character. The authors find four essential types of psychomotor ability: the cyclothymic pyknic, the schizothymic leptosomic, the athletic epithymic, and the infantile labile. Professions and exercise influence psychomotor ability to a certain degree without altering the constitutional properties. The properties of the various psychomotor types are reflected in special motor expressions, as in writing. The authors emphasize the significance of these studies for the applied sciences, such as pedagogy, neurology, and psychiatry.—*A. B. Hunter* (Clark).

3498. Granich, L. An analysis of motivation. *Psychol. Rev.*, 1932, 39, 235-244.—An examination of several current concepts of motive or motivation occurring in present day psychology which are incompatible with a stimulus-response psychology, which holds that the essential immediate antecedent of a response is the excitation of one or more receptors. The concepts are objected to as implying spontaneous initiation or enduring entities over and above stimulus-response.—*A. G. Bills* (Chicago).

3499. Gregerson, M. The physiological mechanism of thirst. *Amer. J. Physiol.*, 1932, 101, 44-45.—The amount of water intake by dogs, during one or two hours of panting, is increased after extirpation of the salivary glands. The deficient salivary flow may, therefore, in the absence of bodily dehydration, cause thirst and increase water intake. However, further experiments in which the water supply was reduced show that the dry mouth in dehydration arises from circulatory adjustments following upon a decrease in plasma volume. The mechanism of thirst is not a simple one.—*C. Landis* (N. Y. Psychiatric Institute).

3500. Hartson, L. D. Analysis of skilled movements. *Person. J.*, 1932, 11, 28-43.—This article calls attention to the importance of distinguishing the different types of movement which function simultaneously in any coordinate action. There are two fundamental movement forms: (1) that in which two groups of opposing muscles are contracted, one

against the other; (2) that in which there is no opposing contraction of muscle groups. Advantages of the latter type, usually called ballistic, are cited. It is emphasized, however, that coordinate action is always a combination of different types of movement. Following a classification of work types, the literature of industrial engineering and applied psychology is systematically reviewed and analyzed. A list of references is appended.—(Courtesy Person J.).

3501. Hinsey, J. C., Ranson, S. W., & Zeiss, F. R. Observations on reflex activity and tonicity in acute decapitate preparations, with and without ephedrine. *J. Comp. Neur.*, 1931, 53, 401-417.—Using an operative technique by which both hemorrhage and level of decapitation could be controlled, the authors conclusively demonstrated that ephedrine facilitated the development of a high degree of resistance to passive flexion in the fore and hind limbs of decapitate dogs. Sufficient resistance developed in the hind limbs to bear the weight of the posterior portions of the body when the front portions were supported by the hands of the experimenter. Ephedrine increases reflex activity, and the reflex activities are about the same whether the transactions are made at the level of the first cervical nerve or the calamus scriptorius. An extensive series of experiments giving quite harmonious results led to the conclusions that in decapitate as well as in chronic spinal preparations, the mechanism for standing is present; removal of shock effects makes its demonstration possible.—C. P. Stone (Stanford).

3502. Huisinga, E. Bleibender Labyrinthausfall mit Erhaltung der galvanischen Reaktion bei der Taube. (Permanent loss of labyrinth function with intact galvanic reaction in pigeons.) *Acta oto-laryngol.*, 1932, 17, 184-195.—Bilateral labyrinth extirpation in pigeons is followed by gradual loss of galvanic reactions. This is probably due to progressive degeneration of the vestibular nerve. When the labyrinths are opened, resulting in a complete loss of function, only the galvanic reactions are normal. In these cases, even after a year, no degeneration of the nerve is found. It is concluded that only the destruction of neuro-epithelium with the fine nerve endings is followed by a degeneration of the nerves and loss of the galvanic reaction. This gives an explanation for the different results found in human labyrinth pathology.—M. B. Mitchell (George School, Pa.).

3503. Jacob, M., & Rochefort, J. Contribution à l'étude de l'équilibre dans le plan antéro-postérieur. (Contribution to the study of equilibrium in the antero-posterior plane.) *Acta oto-laryngol.*, 1932, 17, 195-200.—Clinical observations on vertigo caused by movement in the antero-posterior plane only have led to the theory of a special vestibular organ for movement in this plane. The utricular portion of the vestibule is designated as the seat of control for this kind of movement, with the head of the macula controlling the forward movements and its tail the backward movements. The tonus of the muscles is

regulated at the same time.—M. B. Mitchell (George School, Pa.).

3504. King, C. E., Garrey, W. E., & Brian, W. R. Some factors affecting the spinal reflexes. *Amer. J. Physiol.*, 1932, 101, 64.—The effect of acidosis, alkalosis and anoxia on the knee jerk and ankle flexion were studied in dogs which had been decerebrated. In one group of animals the spinal cord was left intact and in another it was sectioned at the level of the last thoracic segment. The study shows that the diminution in the knee jerk following administration of carbon dioxide takes place at a much lower tension of the gas when the spinal cord is intact than it does when the cord has been sectioned. The direct effect of carbon dioxide on spinal centers is a primary excitation followed by depression. The effects of acid-base changes on the spinal reflexes within normal limits are over-shadowed in other factors by reinforcement and inhibition.—C. Landis (N. Y. Psychiatric Institute).

3505. Landolfi, M. Il riflesso ovaro-pupillare. (The ovaro-pupillary reflex.) *Giorn. med.*, 1931, 6, 2.—The author describes the mechanism of excitation and shows the semeiological importance of the pupillary reflex for the compression of the ovaries, which he has observed for the first time.—E. Calabresi (Rome).

3506. Le Heux, J., & De Kleyn, A. Disturbances of the movements of the alimentary canal after unilateral labyrinth extirpation in cats. *Acta oto-laryngol.*, 1932, 17, 158-163.—The stomach, small intestines, and large intestines were studied periodically by means of X-rays during eight hours after the cats were fed mashed potatoes with barium sulphate. The cats with unilateral labyrinth extirpation showed much slower digestion than normal cats and the same speed as those with both labyrinths extirpated. The greatest slowing up occurred in the stomach and the least in the large intestines. As a control experiment, the bulla ossea was opened and a large amount of the mucous membrane of the middle ear with the sympathetic nerves to the eye were destroyed without injuring the labyrinth. This was done because they were usually destroyed in extirpating the labyrinth. However, their destruction alone did not materially affect the alimentary movements.—M. B. Mitchell (George School, Pa.).

3507. Negus, —. Studies of the larynx of Dipnoi or lung fish; and evidence derived therefrom concerning laryngeal paralysis in man. *Acta oto-laryngol.*, 1932, 17, 261-274.—M. B. Mitchell (George School, Pa.).

3508. Richter, C. P., & Hines, M. Experimental production of the grasp reflex in adult monkeys by lesions of the frontal lobes. *Amer. J. Physiol.*, 1932, 101, 87-88.—If area 6 of Brodmann in the pre-motor area of the frontal lobe is extirpated, it can be shown that the grasping reflex of the monkey appears. This reflex is measured by determining how long the monkey will hang from a horizontal bar by the right or left hand after the operation. The removal of this

area brings about the reflex in the opposite hand, while subsequent removal of the area on the opposite side of the brain brings out the reflex in both hands.—C. Landis (N. Y. Psychiatric Institute).

3509. Rolandi Bicci, P. Considerazioni sui rapporti dell'indice cefalico con la costituzione individuale. (Considerations on the relation between the cephalic index and the constitution of the individual.) *Ann. dell'Istit. Maragliano*, 1931, 2, 89-112.—The author discusses all the hypotheses that have been proposed about this connection. He believes that morphology alone is incapable of giving a complete and synthetic view of the typology of the cranium, while observation of the endocrine constitution of an individual and of a race may place in relief the amount of relation and agreement.—R. Calabresi (Rome).

3510. Thorval, —. Quelques expériences sur la réaction calorique après les injections d'eau froide et chaude. (Some experiments on the caloric reactions after injections of warm and cold water.) *Acta oto-laryngol.*, 1932, 17, 163-184.—Normal subjects were tested in a ventral and dorsal position with injections in each ear of water 7° warmer and 7° colder than body temperature. Records were made for the time between the injections and the appearance of the nystagmus, and the length of the nystagmus. For both warm and cold injections, the reaction time was slightly longer in the ventral position than in the dorsal position. Qualitative differences were found between the nystagmus produced by the warm and that produced by the cold water. Cold water induced a nystagmus which was almost entirely rotary, while warm water sometimes induced a nystagmus which was distinctly horizontal with a weak rotatory phase. Bibliography.—M. B. Mitchell (George School, Pa.).

3511. Salmon, A. Il tono muscolare fisiologico e patologico. (The physiological and pathological muscular tonus.) *Studium*, 1931, 21, 1-38.—Muscular tonus is the resultant of several components: the spinal component of reflex origin, which controls in particular the resting tonus; the cerebellar and mesencephalic components, which chiefly regulate the tonus of position; the vegetative component, important for plastic tonus; and the cortical component, which acts more than all others in movement. The connections which exist between the tonic centers explain the synergy which harmonizes different tonicities. Pathological alterations of muscular tonus reflect their causes in an alteration by excess or defect of given components; most often these modifications concern several components at once.—R. Calabresi (Rome).

3512. Schlossberg, E. Simultaneous internal and external stimulation of the iris by adrenin. *Amer. J. Physiol.*, 1932, 101, 90.—The reactions of the denervated cat's pupil to adrenin instilled into the conjunctival sac and to emotional excitement were studied. Instillation of adrenin begins to produce a marked dilatation of the pupil only after about 12

days following denervation. As time passes, this dilation occurs earlier and lasts longer. Emotional excitement produces stronger and longer widening of the previously instilled pupil. On repetition of emotional excitement, the effect increases.—C. Landis (N. Y. Psychiatric Institute).

3513. Silvette, H., & Britton, S. W. The comparative effects on carbohydrate metabolism of exhausting motive and emotive responses and exposure to cold. *Amer. J. Physiol.*, 1932, 100, 685-692.—The effects of various exhausting conditions on the carbohydrate values in normal cats are considered. When short periods of vigorous muscular exercise such as swimming are undertaken until the animal is fatigued, there is depletion of the stored glycogen with an increase in the amount of blood glucose and lactates. Profound emotional excitation for a brief period also brings about changes in the carbohydrate values essentially similar to those observed after severe exercise. On exposure of animals to cold to a point of inducing slight narcosis, reduction in the carbohydrates of the entire body is shown. Maintenance of the blood sugar level is invariably associated with maintenance of the body temperature within normal limits.—C. Landis (N. Y. Psychiatric Institute).

3514. Simoneit, M. Zur charakterologischen Auswertung von Reaktionsprüfungen. (On the characterological value of reaction-time tests.) *Arch. f. d. ges. Psychol.*, 1932, 83, 357-384.—The amount and types of errors, constancy of reaction, and ability to improve in reaction-time tests, when judiciously interpreted, are useful in studies of characterology.—R. H. Waters (Arkansas).

3515. Southerland, G. F., & Dworkin, S. Conditioned responses to sound and vibrations. *Amer. J. Physiol.*, 1932, 101, 97-98.—Inclosed within a comparatively sound-proof room, dogs were trained to respond to pure musical notes and to tactile vibrations. The responses were those of the secretion of saliva and the flexion reflex to shock. Responses to sound could be elicited to a frequency range of 50 to 20,000 d.v.s. Animals were conditioned to distinguish between air-borne sounds and tactile vibrations. Following surgical lesions in the auditory cortex, no clear-cut conditioned reflexes could be elicited to musical tones. To sounds of great intensity a general motor response was evidenced; this response was absent when a weak note was sounded. The results demonstrate that the general auditory response of Pavlov is essentially a function of sub-cortical regions and is elicited by a sound of great intensity.—C. Landis (N. Y. Psychiatric Institute).

3516. Taylor, H., & Taylor, N. B. Action currents in certain muscles of respiration. *J. Physiol.*, 1931, 71, vii-viii.—Using a needle electrode of the type devised by Adrian and Bronk, electrical responses from respiratory muscles of anesthetized animals have been recorded with a view to determining the periods of activity of these muscles during inspiration and expiration. HCN was used to abol-

ial respiration gradually, and action currents were recorded from the expiratory muscles during pneumotosis, apneusis and gasping. The authors conclude that the expiratory muscles remain inactive during apneusis, which is entirely an inspiratory phenomenon, but one in which inspiration is checked by a reflex inhibition.—*H. Hoagland (Clark)*.

3517. *Uhrbrock, R. S.* Popular usage of the terms 'instinct' and 'instinctive.' *Scient. Mo.*, 1932, 34, 544-546.—Examples from literature are furnished and criticized.—*J. F. Dashiell (North Carolina)*.

3518. *Ulrich, K.* Ohr und Ertrinkungstod. (The ear and death by drowning.) *Acta oto-laryngol.*, Supp. XVI, 1932. Pp. 69.—*M. B. Mitchell (George School, Pa.)*.

3519. *Viana, O.* Motivi disendocrinici in un caso di impotenza femminile. Perizia per annullamento di matrimonio. (Disendocrine causation in a case of female impotence—importance in annulment of marriage.) *Clin. ostet.*, 1931, 10, 625-635.—The author explains a case of impotence in a woman as due to a group of degenerative psychosexual factors, partly disendocrine in origin (masculinism, hypoplasia, dysfunction of the genital organs, vaginismus, sexual inversion) and judges the woman unfit for marriage.—*R. Calabresi (Rome)*.

3520. *Volborth, G. V.* Uslovnii reflexi. (Conditioned reflexes.) *Ukrain. psikhonevrol. instit.*, 1932, 21. Pp. 232.—The book contains nineteen articles which continue on the lines of Pavlov's experimental work. The conditions of the formation and inhibition of reflexes are investigated and new facts from work on the central nervous system and its rhythm are given. The experiments were done with the aid of new apparatus, which is described.—*A. Yarmolenko (Leningrad)*.

3521. *Wiersma, C. A. G.* An experiment on the "resonance theory" of muscular activity. *Arch. néerl. de physiol.*, 1931, 16, 305-336.—One of the conclusions from the "resonance theory," developed by Weiss to account for homologous actions of limbs and other aspects of complex neuro-muscular coordination in animals, is that whenever motor impulses are produced in a nerve as a result of reflex stimulation not only the fibers going to the muscles involved are in action but also the fibers going to muscles which are at rest. The author of this article presents experimental data from neuro-muscular preparations in frogs designed to test the validity of this conclusion. By means of dilute HCl he stimulated the frog's skin at different points in order to bring out desired movements. At the same time action currents were taken from cut nerves, amplified by a four-valve amplifier, and led through a loud-speaker apparatus. As the typical sound caused by the action currents was heard, the experimenter, by moving a lever, made an appropriate notation on the same record sheet as that on which muscular contractions were recorded. In a series of approximately 30 experiments, involving various combina-

tions of nerve-muscle preparations, it was found repeatedly that there was no action current going to muscles which were not involved in the given reflex response. Thus the experimental evidence did not support the conclusion of Weiss. The author suggests desirable modifications of the resonance theory, but has no better theory to put in its place. The need for further experiments along these lines is emphasized.—*C. P. Stone (Stanford)*.

[See also abstracts 3429, 3460, 3461, 3464, 3480, 3496, 3597, 3653, 3677, 3688, 3695, 3699, 3703, 3710, 3716, 3737.]

PLANT AND ANIMAL BEHAVIOR

3522. *Andrews, E. A.* An ant hill. *Scient. Mo.*, 1932, 34, 97-114.—Descriptions of the general architecture of the hills, their rates of growth, and their use as colony homes. They are erected by ants working individually, though in company, rather than co-operatively, as is true also of their food-hunting and nest activities.—*J. F. Dashiell (North Carolina)*.

3523. *Bacq, Z. M.* Observation du comportement maternel du rat albinos sympathectomisé. (Observation of the maternal behavior of the sympathectomized albino rat.) *J. de psychol.*, 1932, 29, 254.—Sympathectomy did not interfere with a rat's care of her young, even though lactation had stopped. Since the continued sucking of the young could only be painful to the mother, the author excludes Giard's theory that maternal behavior is a consequence of the sensations arising from the sucking of the young.—*N. L. Munn (Pittsburgh)*.

3524. *Bierens de Haan, J. A.* Ueber das Suchen nach verstecktem Futter bei Affen und Halbaffen. Zugleich ein Beitrag zu der Frage nach dem konkreten Verständnis dieser Tiere. (On search for hidden food by monkeys and lemurs, with a contribution to the question of concrete intelligence in these animals.) *Zsch. f. vergl. Physiol.*, 1930, 11, 630-655.—The work was done on nine animals: three lemurs (two *L. mongos* and one *L. catta*) and six monkeys (one *Cebus hypoleucus*, the most intelligent animal, two *Nemestrinus*, two *Cercopithecus*, and one *Mona*). The author would close his hand over a piece of fruit which he had shown the animals. All of them tried to open his fingers. When the fruit was concealed in his pocket, however, not all of them tried to explore it, though the majority of them searched in that direction. This restraint was probably due to timidity, since, without exception, they sought and found the fruit when it was hidden in a pot of flowers or under a stone. When the fruit was hidden in a cigar box, a tobacco pouch, or a drawer, only the *Cebus* and one *Nemestrinus* were successful. All of them would pull a string in order to get fruit which had been attached to it and then removed from view, and they would even pull the string in order to gain possession of a box in which they had seen fruit hidden. Various other experiments are described by the author.—*A. B. Hunter (Clark)*.

3525. Bunch, M. E., & Lund, W. R. An experiment on backward association in animal learning. *J. Comp. Psychol.*, 1932, 13, 143-156.—Five groups of white rats ranging in size from 14 to 28 animals were trained to run a multiple-T maze under various conditions of training. A control group learned the maze in a forward direction under ordinary experimental conditions. Another group learned the same maze in a forward direction after six trials of forward guidance. One group learned the maze in the forward direction, and then learned it in the reverse direction (food box and starting point interchanged). The experimental group learned the maze in the reverse direction after six trials of guidance in a forward direction. Another group was given guidance in a different maze, in which, however, the food box and entrance were in the same relative position as in the T maze. "The results indicate that six trials of guidance, limited strictly to the forward direction, in a multiple-T maze (Stone's pattern) facilitate the later learning of this maze in the forward direction and have, upon the later mastery of this maze in the backward direction, a facilitating effect in terms of trials but an interference effect in terms of time and errors. However, the interference effect, of guidance in the forward direction of the multiple-T maze upon the later mastery of this maze in the backward direction, is less than that which occurs when a group of rats is given the same amount and kind of guidance in another maze before the mastery of the multiple-T pattern in the backward direction." Bibliography.—N. L. Munn (Pittsburgh).

3526. Carmichael, L., & Marks, L. D. A study of the learning process in the cat in a maze constructed to require delayed response. *J. Genet. Psychol.*, 1932, 40, 206-209.—It was found possible for a cat to learn to turn to right or left at the end of a common alley in a maze, depending on whether it has entered the alley from left or right (a problem involving a kind of delayed response) and without detectable body orientation in the common alley. No moment of insight was seen.—J. F. Dashiell (North Carolina).

3527. Donaldson, H. H., & Hatai, S. On the weight of the parts of the brain and on the percentage of water in them according to brain weight and to age, in albino rats and in wild Norway rats. *J. Comp. Neur.*, 1931, 53, 263-307.—The brains of albino and Norway rats undergo a rapid early growth and the parts of the brain contribute unequally to its total weight at various ages, as is shown by the authors by means of tables and graphs illustrating the percentage weight of the parts of the brain on brain weight. Sex differences in absolute brain weights are found, but there is no difference in percentage relationships between parts and the whole brain weight at various ages. At similar ages the brains of wild Norway rats are from 10 to 12% above those of the albino. The percentage of water in the brains of the two races is the same, age for age. Particularly noteworthy is the fact that the percentage weights of the parts of the brain as found

by the present authors are in agreement with those of previous workers, despite the fact that slight differences in colonies may have existed and the personal equation of the experimenters might have given rise to small differences. Thus it seems apparent that the percentage relations of the parts of the brain at different ages are highly constant characters.—C. P. Stone (Stanford).

3528. Gulliksen, H. Studies of transfer of response: I. Relative versus absolute factors in the discrimination of size by the white rat. *J. Genet. Psychol.*, 1932, 40, 37-51.—To test the dominance of relative and of absolute factors, respectively, rats were trained by the Lashley jumping method to discriminate white circles (on black background) of 6 cm. and 9 cm. diameters, then were tested with similar pairs of designs of 13 cm. vs. 9 cm., and of 6 cm. vs. 4 cm. Analysis of the data showed evidence for dominance of relative factors (transposition) in a few cases, ambiguous results in many, but evidence for dominance of absolute factors in none. Further experiments to test whether a conflict between relative and absolute factors might be responsible for inaccuracies took the form of presenting, to animals trained on the 6 cm. and 9 cm. circles, a test series with 7½ cm. vs. 5 cm. circles or with 18 cm. vs. 12 cm. With absolute cues thus ruled out, a clear-cut reaction to relationship appeared when the test did not deviate too greatly from the training conditions. The indication is that transfer of reaction, when it occurs, is on a relative basis, but that the transfer is confined to a limited range.—J. F. Dashiell (North Carolina).

3529. Hausmann, M. F. The behavior of albino rats in choosing foods and stimulants. *J. Comp. Psychol.*, 1932, 13, 279-309.—Water, customary rat diet, and a solution of sugar or ethyl alcohol were placed in the cages of white rats. They were to regulate their food and liquid intake from these without any influence from the experimenter. Alcohol, ranging in concentrations from 2 to 36%, was consumed by the rats "in such a way as to absorb always the same absolute amount of alcohol, independent of the concentration." Consumption of alcohol led to a drop in food intake, the drop being such as to maintain at all times an equal caloric intake. The water intake was also reduced with consumption of alcohol. When the intake of alcohol was optional, the animals did not consume enough to lower their activity records in revolving drums. With forced alcohol drinking, activity showed a marked drop. "In the case of optional sugar consumption the same three-fold regulation takes place: (a) the same absolute amount of sugar is consumed; (b) the food intake is constant." Kola increased activity. Bibliography.—N. L. Munn (Pittsburgh).

3530. Hazevoet, A. Einige Beobachtungen über Blasenreflexe beim Frosch. (Some observations on bladder reflexes in frogs.) *Arch. néerl. de physiol.*, 1931, 16, 439-447.—Reflex contractions of the frog's bladder may be aroused in the following ways: (1) electrical stimulation of the central end of the n.

ischiadicus and n. brachialis; (2) stimulation of the stomach—either mechanically with simultaneous injections of strychnine, osmotically by means of NaCl, or electrically. Using the first method, the author found a latency period of between 6 and 50 seconds, and for the most part the two halves of the bladder contracted simultaneously; only rarely was the contraction confined to the side corresponding to the stimulation. The second method of arousing bladder reflexes brought out more diverse reactions. With osmotic stimulation of the stomach a latency period of from 3 to 6 minutes was found, and with electrical stimulation, one of from 40 to 70 seconds. Often electrical stimulation of the stomach induced bladder reflexes only on the left half of this organ.—C. P. Stone (Stanford).

3531. Kappellmann, H. Vergleichende Beobachtungen an gehaltenen Rotkehlchen. (Comparative observations on captive robins.) *Zool. Garten*, 1930, 3, 43-48.—Brief observations on the differences found by the author in the behavior, songs, and reactions of certain tame robins which were kept in captivity.—A. B. Hunter (Clark).

3532. Koehler, O. Die Orientierung von Pflanze und Tier im Raume. II. Zoologischen Teil. (Orientation of plants and animals in space. II. Zoological part.) *Biol. Zentbl.*, 1931, 51, 36-58.—A consideration of a large number of taxic reactions of animals (chiefly protozoa), with arguments favoring A. Kühn's scheme of "excitation-equilibrium" (*Erregungsgleichgewichts*) over Loeb's doctrine of tropisms. 46 references.—E. R. Hilgard (Yale).

3533. Kuo, Z. Y. Ontogeny of embryonic behavior in Aves. III. The structural and environmental factors in embryonic behavior. *J. Comp. Psychol.*, 1932, 13, 245-271.—A detailed analysis of the influence of bodily growth and environmental changes upon the behavior of chick embryos. These factors always led to changes in behavior. For example, increase in the size of the head transformed head lifting into side turning. With increased size the embryo no longer manifested bending and extension and lateral twisting of the trunk. Modes of movement were determined, apparently, by the length and shape of the limbs. The period of greatest amnion contraction was the period of greatest activity in the embryo. The movements of the embryo seemed to be determined by its position in relation to the yolk sac. Kuo scores those who speak of "spontaneous" activity in embryos or other forms. He stresses the point that all behavior is environmentally determined.—N. L. Munn (Pittsburgh).

3534. Lashley, K. S. The mechanism of vision. IV. The cerebral areas necessary for pattern vision in the rat. *J. Comp. Neur.*, 1931, 53, 419-478.—Having destroyed portions of the cerebral cortex of rats, the author performed a series of tests to determine their abilities to distinguish the position, distance, and patterns of visual objects. From a series of experiments on animals in which special care was taken to destroy areas symmetrically located on the

two hemispheres, the following significant conclusions were drawn: (1) Transection of the optic radiations as they emerge from the internal capsule eliminates all capacity for reactions to visual objects, although the ability to distinguish between light and darkness (mediated sub-cortically) is not abolished. (2) If a relatively small lesion is made in the lateral part of the area striata, the animal still retains the ability to distinguish the position and to some extent the distance between objects, but is unable to distinguish between visual patterns. On the basis of total luminosity two objects differing in size may be distinguished. (3) When destruction of the optic radiations is only partial, some inaccuracy of visual acuity follows and the rate of habit formation is retarded. (4) No effects on the capacity to distinguish visual patterns or upon the rate with which visuo-motor habits are formed followed destruction of the medial portions of the striate area, supposedly the visual association area. From this it is inferred that visuo-motor habits requiring the discrimination of fairly complex visual patterns probably are not dependent upon integrations between the striate area and the cerebral cortex.—C. P. Stone (Stanford).

3535. Lashley, K. S. The mechanism of vision. V. The structure and image-forming power of the rat's eye. *J. Comp. Psychol.*, 1932, 13, 173-200.—A thorough study of the various gross and histological structures of the rat's eye and an analysis of their capacity for image formation. No cones were found. The ganglion cells, while decreasing in number from center to periphery, did not show any grouping which might serve as a "point of clearest vision." No foveal depression or other structurally defined sensitive area was observed. The pupillary reflex was found to be as rapid as in man. The eye is myopic. Objects are focused most clearly at a distance of 8-10 cm. Movements of convergence are evident. The findings concerning the image-forming power of the eye correspond with the discrimination behavior of the rat.—N. L. Munn (Pittsburgh).

3536. Loucks, E. B. Efficiency of the rat's motor cortex in delayed alternation. *J. Comp. Neur.*, 1931, 53, 511-567.—Using a serial alternation box suitable for rats and an experimental technique that provided for successive trials, food, and a general anesthetic during the interim between trials without repeated handling of the animals, Loucks endeavored to discover the efficiency of the frontal areas of the rat's cerebral cortex in the alternation habit. One group of animals received training in this problem before operation and the other after operation. The data showed that extirpation prior to training significantly delayed the initial learning time of the operates as compared with normal controls. 11 animals with lesions ranging from 17 to 36% of the neo-cortex failed to show any indications of ultimate mastery of the alternation habit during a training period 3 times as long as the median of the normals. The animals which were operated after the alternation problem had been mastered showed loss of the habit when retested. They also required somewhat

more trials to relearn than they had required in the original series, and likewise more trials than the animals operated before any training at all. The data from the retest series for this group correlated .54 with the size of cortical lesion, whereas only negligible coefficients were obtained between quality of performance and size of brain lesion in animals trained only after the operations. It was of particular interest to find that the operated animals gave no indication of greater stereotypy of performance at the outset of training than normal animals, although a smaller number of chance performances was found in the animals *retrained* subsequent to operation than in those trained only after operation. This point is not satisfactorily explained. On the whole, the study clearly shows that when the problem is adequate for the test a significantly poorer performance is found in rats with frontal cortical lesions. Special features of the study in addition to the foregoing pertain to methods of mapping lesions, plans for scoring errors, the weakness of the Vincent method of equalizing the records of animals, and the contribution of alternatives for the Vincent method.—C. P. Stone (Stanford).

3537. Naundorff, E. Ueber einsichtiges Verhalten, Gemütsleben und Abrichtung einer Dohle. (On the exploratory behavior and the affective life and training of a crow.) *Zool. Garten*, 1929, 2, 299-303.—Observations were made by the author over a period of four years. The crow was very affectionate toward his mistress but showed decided antipathies to certain other persons. As an example of the bird's exploratory powers, the author describes how he could ferret out a grub worm which had been placed in an envelope and hidden between the leaves of a book, the book being then concealed under a rug.—A. B. Hunter (Clark).

3538. Révész, G. Sozialpsychologische Beobachtungen an Affen. I. (Observations on the social psychology of monkeys.) *Zsch. f. Psychol.*, 1930, 118, 142-162.—The author found a decided despotism in monkey groups, which was exercised by the strongest animal. When this animal was absent from the cage, a second animal immediately usurped his rôle and terrorized the others, retreating to his former humble attitude when the real ruler returned. Frequently the youngest animal was exempt from bullying and shared the spoils of the despot. However, a bit of extra impudence on his part would finally call forth chastisement, and the young monkey would then lose his privileged character. According to the author, a comparative study of human and monkey mental characteristics seems possible from the point of view of the affective life of the two species, particularly from the social aspect.—A. B. Hunter (Clark).

3539. Schjelderup-Ebbe, T. Instinkte und Reaktionen bei Pfauen und Truthühnern. (Instincts and reactions of peacocks and turkeys.) *Kwart. psychol.*, 1932, 3, 204-207.—A summary of observations of the behavior of peacocks and turkeys. The main points described are: (1) signs of despotism in peacocks, in common with other male pheasants; (2)

courting activities of the male peacock; (3) behavior of turkeys toward children and chickens, including definite hostility to those to which they are not accustomed; (4) vaso-motor changes in the skin and crop of turkeys in affective situations; and (5) changes in laryngeal expressions of turkeys in affective situations.—T. M. Abel (Sarah Lawrence).

3540. Slater, J. E., & Munn, N. L. A note on brightness vision in the white rat. *J. Comp. Psychol.*, 1932, 13, 273-277.—In this preliminary investigation of the differential brightness threshold the animals were trained to discriminate a stimulus of low intensity from a standard stimulus of relatively high intensity. After the discrimination had been mastered, the stimulus of low intensity was approximated to the standard in brightness. An accuracy of 80% was considered an indication of threshold discrimination. The standard stimulus patches were 3.20 ml, 6.12 ml., and 19.29 ml. in brightness. The thresholds for three white rats ranged from 37 to 57% of the standard brightnesses used. For the standard brightness of 3.20 ml. all of the rats demonstrated a differential threshold of 57%. With the 6.12 ml. standard one rat's threshold was 37% while the other animals demonstrated a threshold of 46%. A threshold of 44% of the brightness of 19.29 ml. was shown by the three rats. The need for a repetition of the experiment with a larger number of subjects and a wider range of standard intensities is indicated.—N. L. Munn (Pittsburgh).

3541. Tinklepaugh, O. L. Maze learning of a turtle. *J. Comp. Psychol.*, 1932, 13, 201-206.—A turtle was run through a five-blind multiple-T maze, which it learned on the fourth trial. It is believed that vision was used in threading the maze and that the exceptionally quick learning was due to intense motivation (the animal was run only on days when it sought food of its own accord) and deliberateness in making choices.—N. L. Munn (Pittsburgh).

3542. Tinklepaugh, O. L. The multiple delayed reaction with chimpanzees and monkeys. *J. Comp. Psychol.*, 1932, 13, 207-243.—Chimpanzees, monkeys, and human subjects were required to respond to a series of delayed reaction situations. In each situation there was a pair of similar receptacles, in the right or left of which the subject had observed food being placed. In some experiments the receptacles were arranged, one pair each, in a number of rooms. In other experiments they were arranged in one room in the form of a circle, the animal being located in the center. The animal, after a given period of delay, was required to obtain the stimulus objects (food) from the appropriate containers, either in the order in which they were placed in one of the various pairs or in broken or reverse order. "With one pair of containers in each of ten rooms the two chimpanzee subjects chose with 88 and 92 per cent accuracy. In the same problem, but with five pairs of containers in five rooms, the monkey subjects made scores of 78 and 80 per cent correct choices. When the pairs of containers were placed

about a circle in one room the percentages of correct choices were:

	3 pairs	4 pairs	6 pairs	8 pairs	12 pairs	16 pairs
Monkeys	73,77	64,84	50,78	56,66		
Chimpanzees				85,90	81,79	78,80

Though the monkey subjects appeared equally eager and attentive, they were far less capable of retaining the memory cues from a long series of situations. In part this limited capacity seemed to be the result of their greater distractibility. There was no improvement with practice, hence "the experiment measures native memory capacity." Adult human subjects did not surpass the chimpanzees on the initial 16-pair test. Children from seven to nine years old were inferior to the apes in the same problem. Chimpanzees could respond correctly to a three-container situation after a week's delay. Positional cues were important in all of the work. The chimpanzees manifested "surprise and disappointment" when an undesirable object had been substituted for the desirable one which the animal had observed being placed in the receptacle. The writer concludes that "the animal subjects respond on the basis of cues of various sorts and from various sources, but that of these, positional cues are the dominant ones." Bibliography.—N. L. Munn (Pittsburgh).

3543. Vignon, P. L'idée organoformatrice chez les sauterelles-feuilles américaines. (The organ-forming idea in the American leaf grasshopper.) *J. de psychol.*, 1932, 29, 241-253.—A discussion of the structure of the grasshopper and its capacity for sensations and ideas.—N. L. Munn (Pittsburgh).

3544. Warden, C. J. A note on punishment as a deterrent in animal reactions. *J. Genet. Psychol.*, 1932, 40, 203-206.—The results of animal experiments in which corporal punishments are effectively used cannot be carried over directly to human society in which cultural values and non-corporal modes of correction have been evolved.—J. F. Dashiell (North Carolina).

3545. Wetmore, A. Bird migration. *Scient. Mo.*, 1932, 34, 459-462.—No one theory is sufficient to explain migration; for although the movement is undoubtedly set off by certain physiological changes synchronized with the seasons, the underlying causes probably vary from species to species. Also the problem of the manner in which birds find their way is unsolved.—J. F. Dashiell (North Carolina).

3546. Weyer, F. Das Problem der Kastendifferenzierung bei den Termiten. (The problem of caste differentiation among termites.) *Biol. Zentbl.*, 1931, 51, 353-373.—Theories of "somatogenic" or "blastogenic" origin of the castes of termites are reviewed, and the experiments of C. B. Thompson favoring the "blastogenic" position are criticized on the basis of new experiments. The relative influence of germinal and environmental conditions on the de-

velopment of the castes remains an open question.—E. R. Hügard (Yale).

3547. Wheeler, W. M. Some attractions of the field study of ants. *Scient. Mo.*, 1932, 34, 397-402.—A discussion of ants as material for observation and study; a brief account of simple equipment needed; and a statement of a few of the problems to the solution of which a student may hope to contribute.—J. F. Dashiell (North Carolina).

3548. Willoughby, E. R., & Pomerat, C. M. Homogamy in the toad. *Amer. Natur.*, 1932, 66, 223-234.—After a summary of the previous work on homogamy, the authors report the measurements and coefficients obtained from four morphological measurements on 86 pairs of mating toads and some of the corresponding indices. The average of the coefficients measuring homogamy was about .3, except in the indices, where it was virtually absent; the animals mated somewhat in the laboratory, with reduced coefficients. A discussion of the evolutionary significance of the problem is presented. Bibliography of 29 titles.—E. R. Willoughby (Clark).

3549. Wilser, T. L. Lichtreaktionen in der fossilen Tierwelt. Versuch einer Paläophotobiologie. (Light reactions in the fossil animal world. A study of paleophotobiology.) Berlin: Borntraeger, 1932. Pp. 192. RM. 18.40.—All modern life is adjusted to modern light distribution and thus to heat and energy which is photochemically active. As soon as the distribution of light changes, corresponding reactions of the organism must follow, unless the organism is protected from light. Those organisms which have little protection from light must withdraw from the stimuli or they must react physiologically in some appropriate way, perhaps by accommodating themselves. One type of adjustment is shown very clearly in the light-sensitive group, including such organisms as echinoderms, cephalopods, teleosts, and reptiles; while in the light-resistant group we find another type of adjustment in such forms of life as corals, anails, the numerous brachiopods, and cartilaginous fishes.—T. L. Wilser (Freiburg).

3550. Zimmerman, W. Die Orientierung von Pflanze und Tier im Raume. I. Botanische Teil. (Orientation of plants and animals in space. I. Botanical part.) *Biol. Zentbl.*, 1931, 51, 21-36.—Principles of integral polarity, referring to the organism as a whole, and of differential polarity, of parts within the organism, are used to account for phototropism, geotropism, and cyclical reactions of plants.—E. R. Hügard (Yale).

[See also abstracts 3433, 3438, 3458, 3469, 3473, 3476, 3487, 3489, 3490, 3502, 3506, 3507, 3508, 3515, 3580.]

EVOLUTION AND HEREDITY

3551. Carter, H. D. Identical twins reared together. *J. Hered.*, 1932, 23, 53-66.—An intensive study of three pairs of identical twins; also a summary of Koch's study of a pair of conjoined twins. Tests of intelligence, achievement, and personality

were administered. "The data suggest that in some cases, at least, identical twins may show a small but consistent difference in mental ability. . . . In these cases where the twins reared together do differ consistently, the differences are not always in line with such environmental factors as are ordinarily considered to be important."—*B. S. Burks* (Pasadena City Schools).

3552. *Dexter, E. S.* On resemblance between mother-daughter and sister-sister pairs. *School & Soc.*, 1932, 35, 640.—The college grades of mothers and daughters both of whom had attended one of two colleges for women were correlated, with resulting coefficients of .287 and .257, respectively. The correlations between the grades made by sisters in these same institutions were .645 and .410; between the grades of 8 twin pairs the r was .92.—*H. L. Koch* (Chicago).

3553. *Famiglietti, A.* Il problema italiano della natalità. (The Italian problem of the birth rate.) *Nuova med. Ital.*, 1931, 4, 1-10.—According to the author the factors which favor increase in births are ruralization of population, education, and above all care of prospective mothers in the period of gestation. A law which requires the announcement of the state of pregnancy makes the rendering of this assistance possible.—*R. Calabresi* (Rome).

3554. *Frangia, L.* Primi risultati statistici dell'inchiesta antropologica sui genitori delle famiglie numero, se in un comune rurale della Sardegna. (First statistical results of the anthropological investigation of the fathers and mothers of large families in a rural community of Sardinia.) *Atti. Soc. cultori sci. med. e natur. in Cagliari*, 1930, 6, 239-251.—*R. Calabresi* (Rome).

3555. *Koffka, E.* Les notions d'héréditaire et d'acquis en psychologie. (Conceptions of the hereditary and the acquired in psychology.) *J. de psychol.*, 1932, 29, 5-19.—After discussing the meaning of inheritance and of acquisition, the author points out that the organism possesses certain characteristics the hereditary nature of which cannot be doubted. It also possesses characteristics of a general nature which may be directed by education. He says, however, that the apparently identical characteristics of different individuals may signify entirely different things. "What is natural evolution in one may be imposed upon the other by external circumstances." Educational implications are indicated.—*N. L. Munn* (Pittsburgh).

3556. *Lidbetter, E. J.* The social problem group. *Eug. Rev.*, 1932, 24, 7-12.—Discussion of pedigree charts showing the interrelations of the people comprising a "social problem group," i.e., families who were dependent upon charity or public funds in 1923. Evidence is found in the pedigrees for family resemblance, assortive mating, "indirect transmission," and the "law of anticipation."—*B. S. Burks* (Pasadena City Schools).

3557. *Newman, H. H.* Identical twins. *Scient. Mo.*, 1932, 34, 169-171.—The differences of six pairs

of identical twins reared apart have been compared as to physical, mental, and temperamental traits, with the average differences of fifty pairs of identical twins reared together. Environment has distinctly modified such physical traits as weight and health, but not such as eye-color, hair, teeth, and features. Environment has profoundly modified "intelligence" and "temperament."—*J. F. Dashiell* (North Carolina).

3558. *Raxroad, C. N.* Recent studies of twin resemblance. *Psychol. Bull.*, 1932, 29, 204-217.—57 titles summarized under the headings: diagnosis of monozygotism; reversed asymmetry; trait resemblances (anatomical, intelligence, educational, personality, miscellaneous); abnormalities (developmental, disease resistance, neuroses and psychoses); comparison of older and younger twins; identicals reared apart; and monozygotic triplets. In general, resemblances between siblings, between unlike-sexed twins, between like-sexed fraternal, and between identicals, increase in that order for traits theoretically ascribable to hereditary but not for those theoretically ascribable to environment.—*J. F. Dashiell* (North Carolina).

3559. *Tietze, C.* The differential birth-rate changes in Germany. *Eug. Rev.*, 1932, 24, 31-32.—The birth-rate in Germany has declined from 36.6 in 1881-90 to 17.5 in 1930. The decline has nearly come to a stop among the liberal professions and public officials, but is making great progress in the wage-earning classes. Occupational figures are listed for 1925-29.—*B. S. Burks* (Pasadena City Schools).

3560. *Vogt, O.* Neurology and eugenics. *Eug. Rev.*, 1932, 24, 15-18.—Experimental genetics may assist neurology through finding applications in human heredity of work upon gene *Penetrans*, hybrid viability, and linkage. The contribution of the neurologist to the eugenicist lies in research on the structure of brains of socially valuable persons, and upon the physiology and metabolism associated with favorable mental traits.—*B. S. Burks* (Pasadena City Schools).

[See also abstracts 3548, 3619.]

SPECIAL MENTAL CONDITIONS

3561. *Besterman, T.* The psychology of testimony in relation to parapsychical phenomena: report of an experiment. *Proc. Soc. Psych. Res. (E)*, 1932, 40, 365-387.—42 sitters in all were asked to witness, under the conditions of an average sitting in the Society's séance-room, "a few simple phenomena to take place by normal means," the demonstration to be followed by questioning on the facts, not interpretations, of what had happened. The questionnaire used combined the method of direct questions with that of spontaneous narrative, and was scored in partial (positive) credits. "The sitters' testimony was correct in proportions ranging from 5.9% to 61%, averaging 33.9%." The sitters' accuracy on the different items are compared. On an inter-

current disturbance the accuracy was very low. In listing articles seen on the table, "the degree of accuracy . . . is governed chiefly by their size" though partly by movement and position. The sitters' estimates of a time interval, which was 19 min. long, averaged 18.5 min., but varied individually from 5 to 40 min. There was a slight tendency to underrate the number of persons present. Reports of conditions of visibility, of auditory conditions, and of which hand was used by the demonstrator, were extremely inaccurate. 13 sitters experienced illusions or hallucinations, especially of movement, though reporting more facts, on the average, than did the other sitters. No significant difference in accuracy was found between the sexes, or between spiritualists and non-spiritualists. Reference to French and German work on the psychology of testimony, also to the English work in connection with psychical research which preceded, are included.—*W. S. Taylor (Smith)*.

3562. Bolli, L. *Le rêve et les aveugles. I. Le rêve et les aveugles-nés.* (The dream and the blind. I. The dream and the congenitally blind.) *J. de psychol.*, 1932, 29, 20-73.—The dreams of the congenitally blind are found to be totally lacking in visual imagery. There is a substitution of vivid auditory and tactual imagery which deprives the dreams of none of their copiousness and rapidity. Many case studies are given.—*N. L. Munn (Pittsburgh)*.

3563. Bolli, L. *Le rêve et les aveugles. II. De la survivance des images visuelles.* (The dream and the blind. II. The survival of visual images.) *J. de psychol.*, 1932, 29, 258-309.—Persons who become blind after the first five years of life maintain visual images in dreams, although these undergo a progressive deterioration as the individual becomes older. Memories of infancy seem to predominate in visual dreams. There is no evidence that the blind compensate for visual privation by developing superior acuity in the remaining sense modalities. Their seemingly greater acuity is a result of greater dependence upon these senses than is found in normal individuals. Case studies.—*N. L. Munn (Pittsburgh)*.

3564. Endara, J., Rivadeneira, J., Leon, L. A., Chaves, F., Castro, L. F., Jarrin, L. H., Espinosa, L. A., Munoz, J. P., Villacreses, J. C., Olean, N., Salvador, L., Romo, C., & Mora, C. *Los temperamentos.* (Temperaments.) Quito: 1930. Pp. 318.—In collaboration with several of his students, Endara collected the following studies on temperament and its pedagogical relationships: the first chapter is essentially biological and endocrinological; the second deals with the neuro-vegetative system; the third treats of the relations of this system to the endocrine glands; the fourth is anthropological, and deals with the main divisions into types according to Kretschmer; while the last three chapters are concerned with the emotional constitution, the constitution of personality in its autistic or syntonie aspects, and with various pedagogical applications. In conclusion there is a discussion of the rôle of hereditary and environmental factors, the question of aptitudes, and

certain practical problems of sexual education, work, and play.—*A. B. Hunter (Clark)*.

3565. Ferenczi, S. *Quelques observations cliniques de cas de paranoïa et de paraphrénie.* (Some clinical observations on cases of paranoia and paraphrenia.) (Trans. by H. Hoelsi.) *Rev. fr. de psychanal.*, 1932, 5, 97-105.—This article first appeared in German in 1914, and has also been translated into English. It reports briefly two clinical cases, with interpretations of the psychic mechanisms underlying the delusions and other symptoms.—*P. Blanchard (Philadelphia Child Guidance Clinic)*.

3566. Freud, A. *Introduction à la psychanalyse des enfants.* (Introduction to child psychoanalysis.) (Trans. by E. Roshat.) *Rev. fr. de psychanal.*, 1932, 5, 71-96.—The material covered in this article has previously been published in English, and most of it will be found in English in the monograph *Technique of Child Analysis*, which has been available since 1928.—*P. Blanchard (Philadelphia Child Guidance Clinic)*.

3567. Freud, S. *Remarques psychanalytiques sur l'autobiographie d'un cas de paranoïa (dementia paranoïdes).* (Psychoanalytic remarks on the autobiography of a case of paranoia (dementia paranoïdes).) (Trans. by M. Bonaparte & R. Lowenstein.) *Rev. fr. de psychanal.*, 1932, 5, 2-70.—This interpretation of the mental mechanisms of paranoia is based on the autobiography of Dr. Daniel Paul Schreber, published under the title (in English translation) of *Memoirs of a Neurotic*. Freud's original study of Schreber's case appeared in German in 1911. An English translation of Freud's study appeared in Volume III of the *Collected Papers* in 1925. The present article is a translation into French from the original German.—*P. Blanchard (Philadelphia Child Guidance Clinic)*.

3568. Freystadt, B. *Vergleichende Untersuchungen über die Wirkung von lokalen Betäubungsmitteln.* (Investigation of the comparative action of local anesthetics.) *Acta oto-laryngol.*, 1932, 17, 326-350.—The tongue was used in testing the relative effectiveness of different surface anesthetics. The nervus lingualis and the nervus alveolaris were used in testing the effectiveness of conduction anesthetics. Three phases of each anesthesia were studied: the quickness of effect, the duration of effect, and the depth of effect. The latter could be determined by the fact that in inducing any anesthesia the sensations of taste and cold disappear first, followed by the disappearance of the sensation of pain and the reflexes, and finally by the loss of the sensation of touch. The results for the surface anesthetics are as follows: (1) The drugs in order of speed of effect are pantocain, psicain N, cocaine, alypin, peresin. (2) The drugs in order of duration of effect are, peresin, pantocain, cocaine, alypin, psicain N. (3) The depth of effect is largely dependent on the concentration of the drug, although the other two qualities, quickness of effect and duration, are very little affected by concentration. Pan-

tocain has the deepest effect; in a solution of 2-2½% it produces a loss of the sensation of touch. Next in depth come cocaine, alypin, and psicain N, each in 20% solutions; 20% tutocain and 20% psicain (except psicain N) are weaker. Even a 30% solution of novocain has a relatively weak effect. Four different drugs were tested as conducting anesthetics, 2-4% novocain with adrenalin, .75-1% tutocain with adrenalin, 2% percain, and 2% pantocain. The results are as follows: (1) Novocain and tutocain produced the quickest effect, but pantocain and percain were not far behind. (2) Percain has the longest effect, pantocain next. Percain's effect lasts several times as long as that of novocain or tutocain. 3.4% novocain with adrenalin is most efficient for depth of effect; it usually produces loss of the sensation of touch. Tutocain is about as effective as novocain when it is about 2½ times as concentrated as the novocain.—M. B. Mitchell (George School, Pa.).

3569. Gilliland, A. R. The psychology of character. *Rel. Educ.*, 1932, 27, 418-423.—No instinct or emotion is of itself moral or immoral; it is rather the expression of it that can be so characterized. It is therefore of the first importance to form habits that shall be moral. The parent fosters such habits by rewards and punishments, and it is essential that this parental guidance should be consistent if the child is to develop into a normal individual. However, in meeting new situations of life it is necessary for one to draw upon his personal desires and intelligence, and adjust conduct to his individual needs.—J. P. Hylan (Stoneham, Mass.).

3570. Jastrow, J. The house that Freud built. New York: Greenberg, 1932. Pp. x + 293. \$2.50.—The author presents and criticizes the psychoanalytic doctrine; Part I is the presentation, Part II the criticism. His position is that the concepts are in almost all cases needlessly involved, unscientific and even dangerous, but that there is a valuable mode of attack present which may be re-worked and assimilated into the structure of standard psychology.—R. R. Willoughby (Clark).

3571. Kleitman, N., & Camille, N. Studies on the physiology of sleep. VI. The behavior of decorticated dogs. *Amer. J. Physiol.*, 1932, 100, 474-480.—"Decorticated dogs have several periods of sleep alternating with periods of activity each 24 hours. Their activity consists of almost incessant walking in circles. The most constantly occurring period of sleep follows very shortly after feeding." They conclude that diurnal sleep in dogs depends upon the presence of the cerebral cortex for its establishment and persistence. They feel that this work offers no conflict between the sub-cortical and cortical theories of sleep. The sub-cortical theories account for sleep in general, while the cortical theories account for the special type of sleep seen only in man and in higher animals.—C. Landis (N. Y. Psychiatric Institute).

3572. Loewenstein, E. D'un mécanisme auto-punitif. (A self-punishing mechanism.) *Rev. fr.*

de psychanal., 1932, 5, 141-151.—The need for self-punishment is illustrated in dreams of patients, which show this mechanism clearly when analyzed, and in neurotic symptoms, which in analysis turn out to be self-punishments. Illustrations are given from analyses of patients. In the production of these dreams and symptoms, the super-ego chastising the ego is the basis of the self-punishment. A conscious desire to punish appears in mankind, toward the self and others. In evidence are mentioned customs of punishing crimes and the conception of a hell which will furnish eternal punishment. In the self-punishment appearing in neurotic symptoms, the id as well as the ego and super-ego may be involved. Some of the repressed impulses of the id, being rejected by the ego when they seek recognition from it, may make a detour into the super-ego, and then get into the ego through the mechanism of self-punishment.—P. Blanchard (Philadelphia Child Guidance Clinic).

3573. Lorand, A. Das Altern, seine Ursachen und Behandlung. Eine Anleitung zur rationalen Lebensweise. (Old age, its causes and treatment. A guide to a rational way of living.) Leipzig: Barth, 1932. Pp. vi + 198. M. 5.25.—On the basis of the author's experimental proof that there is a close reciprocal relationship between the glands of internal secretion, and on the grounds of his clinical observations, he in 1904 ascribed old age to the degenerative changes in these glands and recommended treatment of old age by internal means, first of all organ extracts, then established remedies like iodine to affect the thyroid, iron and arsenic to affect the sex glands, and radioactive iron-containing mud baths, etc., as well as hygienic dietetic measures, in which avoidance and treatment of intestinal auto-intoxication play a large rôle. In the first edition he indicated the great influence of these glands on the nervous system and the condition of the mind and spirit, and also described the onset of certain mental diseases following changes in these glands, e.g., dementia praecox after changes in the sex glands. Several chapters deal with the influence of mind on the onset and treatment of old age. The new edition contains the latest investigations, covering numerous changes and additions especially in the field of organotherapy, and also several new chapters, among them one on the true meaning of the sex act, and one on cures through certain diets. This new edition contains two additional chapters on the improvement of the heart action by a rational choice of food, and on the avoidance and treatment of arteriosclerosis, which were not included in the earlier edition.—A. Lorand (Carlsbad).

3574. May, M. A. Problems of measuring character and personality. *J. Soc. Psychol.*, 1932, 3, 131-145.—Personality testing does not require the assumption of "traits." A testing program is in reality a sampling of behavior, and the term "trait" is only a convenient name for a group of such samples having a certain similarity; it represents no psychological entity. With this view in mind, the writer discusses certain technical and practical prob-

lems in testing, choice of material, method of recording, determination of reliability and validity, scoring and the establishment of norms, and finally practical problems of administration. All of these problems, he holds, are simplified if one abandons the view of character as a series of traits.—E. B. Newman (Frankfurt).

3575. Osipov, V. [Methodology of psychic research.] *Obosrenie psikhiat. nevroi. i reflektol.*, 1930, No. 5, 2-8.—A. Yarmolenko (Leningrad).

3576. Pérés, J. Le rêve de la veille dans le roman proustien. (The dream of observation in the Proustian novel.) *J. de psychol.*, 1932, 29, 105-111.—A discussion of the feeling that one is an observer of ephemeral events which inheres in the novels of Marcel Proust.—N. L. Munn (Pittsburgh).

3577. Salewski, W. "Die Psychoanalyse Sigmund Freuds." Grundfragen und Konsequenzen. (The psychoanalysis of Sigmund Freud; its fundamental questions and consequences.) Stuttgart: Christengemeinschaft, 1931. Pp. 48.—This paper is written as a protest against the bestowal of the Goethe prize of 1930 on Sigmund Freud. It contains the following chapters: (1) for an understanding of the psychoanalytical methods of treatment; (2) the Oedipus complex as the central problem of psychoanalysis; (3) human nature on its head; (4) of the double nature in man; (5) sex and individuality; (6) the ego, id, and super-ego; (7) practical consequences: psychoanalysis or pastoral care? The author tries to indicate how in Freud's psychoanalysis the consequences of mechanistic and biological materialism join hands, and how in absolute opposition to Goethe's world view man is essentially clothed in his individual character. Salewski tries to show how through Freud's materialistic dogmatism, which attributes all spiritual creation to mere sublimation of repressed instinctual complexes, the spiritual and morally binding foundation is removed from all objective values. If, as according to Freud's statement, our whole psychic activity is automatically regulated by the sex principle (22nd lecture), then every scientific claim for objective judgment of character is an absurdity. But this means, as Bumke says of Freud's psychoanalysis, the destruction of all science.—W. Salewski.

3578. Soal, S. G. Experiments in supernormal perception at a distance. *Proc. Soc. Psych. Res.* (E.), 1932, 40, 165-362.—The author reviews previous experiments and concludes that some of their results are better than chance. He describes carefully his own experiments, which were with many different objects on several hundred subjects at various distances. "It frequently happened that two percipients living widely apart recorded similar impressions at approximately the same time," though without apparent relation to the object chosen by the agents; this might have been due to common influences such as newspapers and radio. Similar coincidences occurred in a control test in which the subjects noted the words they chanced upon in opening their

dictionaries at random. Here some 50% of the words were taken from the second third of the dictionary, and about 25% from each of the other thirds. In the guessing or sensing experiments, marked differences in popularity were revealed for different digits, numbers, letters, playing-cards, geometrical figures, and colors. (Preference lists, reminiscent of the Kent-Rosanoff test, were worked out.) The results of the experiments are treated statistically, in relation to the theoretical distribution of random guesses. The outcome is a complete failure to discover "on the scale of the present experiments any mass faculty of supernormal perception. . . . Increasing the number of agents even until it reaches 30 per cent. of the number of the percipients produces no observable effect on the result." Nor does there appear "any serious evidence whatever for what Warcollier has called 'la contagion mentale' or telepathic rapport between pairs or among groups of percipients." There is equal failure "to discover individual percipients with indisputable claims to a supernormal power," despite interesting convictions on this point expressed by a number at the outset. The author hopes that his experiments will combat a tendency on the part of many to suppose that psychical experiences are very common, and will throw into relief the loose and wishful character of much "experimentation" in this field. At the same time, he thinks the very paucity of his own results "greatly enhances the claims of a few exceptional people in the world (such as Mrs. Piper and Mrs. Leonard) to be considered possessors of supernormal faculties. For these individuals have succeeded in producing extraordinarily complex coincidences week after week and year after year." Also, "it may be that the conditions of the present experiment are not those under which supernormal knowledge makes its appearance." He suggests possible conditions.—W. S. Taylor (Smith).

3579. Sterninger, O. Zur Psychologie des Witzes. (On the psychology of wit.) *Arch. f. d. ges. Psychol.*, 1932, 83, 457.—The theory is advanced that the comical is the result of a certain attitude or expectation being suddenly turned, changed, or broken by the introduction of something incompatible with it.—R. H. Waters (Arkansas).

3580. Stone, C. P., Darrow, C. W., Landis, C., & Heath, L. L. Studies in the dynamics of behavior. Chicago: Univ. of Chicago Press, 1932. Pp. xiv + 332. \$5.00.—The volume consists of three studies, to which K. S. Lashley contributes an editor's introduction. They are: *Wildness and Savageness in Rats of Different Strains* (Stone, 58 pages); *Reaction Tendencies Relating to Personality* (Darrow and Heath, 206 pages); and *An Attempt to Measure Emotional Traits in Juvenile Delinquency* (Landis, 62 pages). Stone finds that the wildness and savageness of all strains of rats may be markedly reduced in ten days with three handlings (successively) per day, and that there are large and apparently hereditary differences between strains, recently trapped wild rats being most savage and

wild and colony albinos least so. Darrow and Heath succeed in associating constellations of items on the Thurstone Personality Schedule (supplemented by the Gilliland-Morgan introversion-extroversion scale) with "syndromes" of measured physiological reactions, but the coefficients, although significant, are in the thirties. Landis applies a large number of personality scales and tests to over a hundred delinquent adolescents of each sex, but obtains no differentiating coefficients and only one significant one, viz., that between introversion and neuroticism.—*R. R. Willoughby* (Clark).

3581. White, C. M. The categories of substance, cause and function in Freud's psychology. *Psychol. Rev.*, 1932, 39, 203-224.—Psychoanalysis has attempted a psychological explanation of neurotic symptoms, as opposed to a physiological or biological one. It began as a practical mode of treatment, but has developed in addition a "metapsychology," a theoretical system with many defects. Freud's treatment of the category of substance, in which he attempts to substitute psychic substance for the somatic substance of medicine, and his treatment of the problem of causation, in which dynamic and mechanistic concepts are mixed, have vitiated his system. His greatest contribution thus far is the study of psychological activity in the light of its genetic setting. Its subject matter can be described as consisting of functions and functional products, provided function is defined as a way of working.—*A. G. Bills* (Chicago).

3582. Witty, P. A., & Lehman, H. O. Nervous instability and genius: military and political leaders. *J. Soc. Psychol.*, 1932, 3, 212-234.—In refutation of the thesis that genius and nervous instability are not necessarily related, the writers review evidence from the lives of five military leaders which shows their eccentricity and instability. It is often true that this type of leader does not possess an unusual degree of ability. The writers reiterate their former thesis that the thwarting of certain drives results in the redirection of energy, thus leading to outstanding attainment.—*E. B. Newman* (Frankfurt).

[See also abstracts 3497, 3514, 3600, 3604, 3622, 3637, 3764, 3782, 3786, 3798.]

NERVOUS AND MENTAL DISORDERS

3583. Bohn, R. W. Sodium amytal narcosis as a therapeutic aid in psychiatry. *Psychiat. Quar.*, 1932, 6, 301-309.—Sodium amytal was first introduced at the Gowanda State Hospital early in 1929. The results were so remarkable in all types of operative work with psychiatric cases that it was suggested as a therapeutic agent in certain of the psychoses, especially the exhaustion deliria, acute manic phases, acute agitations and status epilepticus. Its use makes the patient more tractable and carries the case over a very critical period. It is comparatively easy to administer and is perfectly safe in the hands of an experienced physician, producing safely and

quickly a deep narcosis in the most disturbed mental cases.—*E. T. Burr* (Vocational Adjustment Bureau).

3584. Braun, L. Herz und Angst. Eine ärztlich-psychologische Studie. (The heart and anxiety. A medico-psychological study.) Vienna: Deuticke, 1932. Pp. 119. M. 6.00.—This study verifies the impression that sensations of anxiety are designated as specific sensations of the heart. The author has arrived at this view through observations of sick people. The idea of anxiety has always had a connotation of bodily "objectlessness" both in the history of mankind and in all forms of speech. This idea of anxiety should be contrasted with fear, in which we have "bodiliness" always present. This article explains a large number of statements from the literature of folk-lore, as well as from the works of the great poets and thinkers. The heart sensations of cardiacs are often more or less hidden; frequently, however, they are clear, in which case we have anxiety. The change of heart rhythm can disturb psychological equilibrium and bring about a mood characteristic of anxiety. From angina pectoris we may go directly to the phenomenon of anxiety. The "anxiety-angina," that is, the angina attack without pain, is one of the clearest and most imposing manifestations of anxiety; it serves to document the connection between the heart and anxiety by its eventual mortal result as well as by the connection between anxiety and death. This study refers only to pure anxiety sensations, or to cardiac anxiety, not to the numerous psychological manifestations, which group themselves about these in any given case. However, it will be seen that angina pectoris serves as a guide post for the students of the physiology and psychology of anxiety and its mental consequences. A separate section is devoted to a phylogenetic study of fear and anxiety, another to the diagnostic interpretation of the anxiety dream, for the dream frequently gives a picture of the condition of the body, and in the waking state this material can be found only below the threshold of consciousness.—*L. Braun* (Vienna).

3585. Charchenko, S. I. [The peculiarities of the "fear symptom" in encephalitics.] *Zh. neuropatol. i psikiat.*, 1931, No. 4, 48-49.—*A. Yarmolenko* (Leningrad.)

3586. D'Alessio, G. B. Gli infantilismi. (Infantilisms.) Naples: Ediz. rass. internaz. clin. e terap., 1932. Pp. 36.—The distinction must be made between true forms of infantilism and the forms of pseudo-infantilism, but we must recognize the fact that where there is infantilism there is always an alteration of endocrine function, which most often involves the whole glandular system, or at least several endocrine glands. Even in myxedematous infantilism the alteration never concerns the thyroid gland alone. However, we may discuss whether the cause of the endocrine alteration has any relation to syphilis, tuberculosis, etc. The diagnosis of infantilism is simple only where there coexist symptoms of dwarfism, hypogenitalism, and psychic arrest, which are all of fundamental importance; but in every case

there is great difficulty in determining the locus of the lesion, which is very important for therapy. In the chapter devoted to therapy the author gives much information and many practical hints about hormone therapy, and affirms that failures have their causation in the inefficacy of pharmaceutical products, not in therapeutic method.—*R. Calabresi* (Rome).

3587. De Sanctis, S. *Di alcune forme cliniche neuro-psichiatriche con deficit mentale.* (In regard to some clinical neuro-psychiatric types with mental deficiency.) *Riv. sper. di fren.*, 1932, 56.—The chronic defectives (hypophrenics and demented) may be presented under three different clinical types. The first presents a symptomatology principally cortical and pyramidal; the second a symptomatology chiefly sub-cortical and extra-pyramidal; the third a mixed cortico-basal symptomatology. In all these cases the personality in the modern sense of the word is largely defective, while very different degrees of quantitative and qualitative alteration of intellectual attitudes may be recognized. The author tries to unify in a single concept the chronic defective states, but he tries also to give a neurological and psychological differential semeiology.—*R. Calabresi* (Rome).

3588. De Sanctis, S. *Sulla semeiotica mentale e la tecnica clinica.* (On mental semeiology and clinical technique.) *Rinascenza med.*, 1931, 8, 1-6.—The author gives the principles of a mental semeiology of a clinical character, which differs from that of the laboratory. We must first study the psychotic with the methods of general medicine in their spontaneous behavior; but examination by questioning is the foundation of this clinical technique.—*R. Calabresi* (Rome).

3589. Diagarov, M. A. [On the rôle of alcoholism in the etiology of epilepsy in infants.] *Zh. nevropatol. i psikiat.*, 1931, No. 6, 62-67.—*A. Yarmolenko* (Leningrad).

3590. Doll, E. A. *Research opportunities at Vineland.* *Tr. School Bull.*, 1932, 29, 21-34.—The Training School has 275 acres and 450 patients. It is 4 miles from an industrial farm colony of 1400 acres housing 100 patients. The institution provides care and training for mentally subnormal children. The research department in 25 years has acquired stability and reputation. During the past 6 years the research has been largely fundamental and exploratory. Among the fields of inquiry anticipated are mongolism, idiocy, birth palsy, etc. The program deals with three major aspects of feeble-mindedness: description, adjustment, and causation. The method is objective and quantitative. The point of view is scientific, while the motivation is humanitarian.—*E. M. Achilles* (Columbia).

3591. Ginsburg, A. G. [On the symptomatology of brachial neuralgia.] *Sovietskaya Psichonevrologia*, 1931, No. 2-3, 60-71.—The author shows that the positive Lazarev symptom (that finger pressure on the V, IV, and III spinal processes is experienced as painful in brachial neuralgia) is observed in 98% of the cases of neuralgia and neuritis and can be

used as a pathognomonic sign.—*A. Yarmolenko* (Leningrad).

3592. Goudge, M. E. *Abnormal psychology in general medical practice.* *J. Abn. & Soc. Psychol.*, 1931, 26, 333-337.—Many ailments which usually are attributed to physiological causes may be due to or accompanied by problems essentially psychological. The ordinary practitioner does not feel he can devote time to specialized training in psychology as well as in medicine. It is necessary, therefore, for the closest cooperation to exist between psychologist and physician, not only in diagnosis, but also in treatment.—*C. H. Johnson* (Boston Psychopathic Hospital).

3593. Helmer, R. D. *Adjustment versus recovery.* *Psychiat. Quar.*, 1932, 6, 314-318.—The psychiatric diagnostic classification now in general use throughout the United States was adopted by the American Psychiatric Association in 1917. Although this diagnostic table has been in use only 15 years, new viewpoints are being set forth and a new classification will probably result. Recently there have been appearing in psychiatric literature such terms as "social recovery" and "financial recovery" instead of the old term, "recovered." The author suggests that since when a patient's discharge is under consideration one of the most important questions to be determined is the degree of insight present, the new phraseology should include such terms as readjusted with insight, readjusted without insight, restricted readjustment, unadjusted. Explanatory notes on each of these classifications follow.—*E. T. Burr* (Vocational Adjustment Bureau).

3594. Hollingworth, H. L. *The illusion as a neurosis.* *J. Abn. & Soc. Psychol.*, 1931, 26, 270-282.—The initial motive of this discussion is the suggestion that perceptual illusion constitutes an adequate "laboratory neurosis." It enables the experimental variation of just such factors as enter into the more obscure and complex neuroses of the clinic, with all the influences reduced to a level which permits control and repetition to have quantitative comparison. Illusions are maintained or increased with repetition, if repeated with no change in the circumstances. In order for them to disappear or decrease with practice, one of several influences must be introduced. Improvement in sagacity may be attempted through explanation and through directing attention to other aspects of the situation. Elimination of the effective cue is accomplished by changing the environment; or the stimulus may be given a new reaction value.—*C. H. Johnson* (Boston Psychopathic Hospital).

3595. Holmes, S. J. *Mental deficiency in Great Britain.* *J. Hered.*, 1932, 23, 89-91.—A review of the 1929 report of the Mental Deficiency Committee, London. In large representative areas of Great Britain data were collected regarding feeble-minded, epileptic, and insane defectives. Mental defectives constitute about 8 per 1000 of the population studied. The 1929 study reveals about twice the pro-

portion of defectives found 20 years previously by the Royal Commission on Feeble-Mindedness. Eugenic implications are conservatively discussed in the report.—*B. S. Burks* (Pasadena City Schools).

3596. Janet, P. Les sentiments dans le délire de persécution: I. Les sentiments d'emprise. II. L'objectivation social. (The feelings in the delusion of persecution. I. Feelings of confinement. II. Social objectivation.) *J. de psychol.*, 1932, 29, 161-240.—A detailed analysis of the various types of persecutory delusions and the ways in which they manifest themselves in social relations.—*N. L. Munn* (Pittsburgh).

3597. Landis, C. Psychiatry and the "psychogalvanic reflex." *Psychiat. Quar.*, 1932, 6, 262-272.—The particular relationships between the alterations of the electrical phenomena of the body, which are spoken of generally as the "psychogalvanic reflex," and mental states, conditions or moods, may be said to have been started by Vigouroux, who was chief of electrotherapy at the Salpêtrière in Paris. Vigouroux in 1879 observed and reported that the electrical resistance of the human body varied in hysterical conditions, and attributed this variation to changes in the irrigation of the tissues by the blood stream. But as a result of more recent neurophysiological findings there is no reason to believe that the psychogalvanic reflex has anything to do with nervous and mental diseases as such. The "reflex" is, however, a valid means of demonstrating the integrity of the sympathetic innervation serving the particular portions of the skin to which the electrodes are attached. It might also be used to demonstrate pathological states within the autonomic nervous system and possibly to indicate the level of nervous reactivity of an individual. Beyond this, present-day research does not warrant scientific generalization. A bibliography is given.—*E. T. Burr* (Vocational Adjustment Bureau).

3598. Lang, H. B. A note on the use of sodium amytal and sodium rhodanate in the psychoses. *Psychiat. Quar.*, 1932, 6, 380-383.—The author seeks to clarify some of the misleading statements that have been made regarding the effect of the administration of these two drugs and prevent further misconceptions as to their curative value. The results of a study of 46 cases were reported by the press, but it was not made sufficiently clear that the improvement mentioned was present during the administration of the drug and that the cases relapsed to their previous states on removal of the drug. This experimental group is far too small to warrant any definite conclusions, but the results do indicate the need for continued study. It must be emphasized, however, that although the use of sodium amytal and sodium rhodanate may offer possibilities as a method of treatment in the psychoses, results cannot be predicted, and it is not by any means a method that can be called curative.—*E. T. Burr* (Vocational Adjustment Bureau).

3599. Malsberg, B. Life tables for patients with mental disease. *Psychiat. Quar.*, 1932, 6, 226-241.—

The rates of mortality at corresponding ages are from 3 to 6 times as great among patients with mental disease as among the general population. The author notes significant differences, however, in the direction of the trends of the mortality rates in the early years, for rates among patients decrease, whereas those in the general population increase steadily. The study is based on a total of 12,599 deaths in the New York civil state hospitals, occurring between July 1, 1928 and July 1, 1930.—*E. T. Burr* (Vocational Adjustment Bureau).

3600. Micheev, W. G. [The anatomical problem of dreams.] *Zh. nevropatol. i psikiat.*, 1931, No. 3, 75-82.—The author describes 5 cases of insomnia, where brain lesions were localized in the optic thalamus and Sylvian aqueduct.—*A. Yarmolenko* (Leningrad).

3601. Mnuchin, S. S., & Oparina, N. V. [On dementia infantilis Kellersi.] *Obosrenie psikiat. nevrol. i refleksol.*, 1930, No. 5, 18-25.—The authors describe 4 cases demonstrating the rare form of infantile insanity; it may be differentiated from dementia praecox and oligophrenia.—*A. Yarmolenko* (Leningrad).

3602. Murray, V. F., & Burns, M. M. The use of sodium amytal in the treatment of psychoses. *Psychiat. Quar.*, 1932, 6, 273-300.—This article reviews some of the recent experimentation in which several types of drugs have been used in an effort to modify the course of the psychosis by promoting mental and physical rest and increasing the accessibility of the patient. Several case histories are given to illustrate the successful use of amytal in the treatment of dementia praecox, catatonia, and depressions. The dosage, blood pressure and excerpts from the record of each patient are noted in some detail.—*E. T. Burr* (Vocational Adjustment Bureau).

3603. Palatnik, —, & Shmorian, —. [Technical propaganda in neurology and psychiatry.] *Zh. nevropatol. i psikiat.*, 1931, No. 6, 124-127.—*A. Yarmolenko* (Leningrad).

3604. Parcheminey, G. L'hystérie de conversion. (Conversion hysteria.) *Rev. fr. de psychanal.*, 1932, 6, 106-140.—This article briefly reviews the various theories of hysteria which have been formulated by Kretschmer, Claude, Janet, Babinski, and a great many others, and then presents in much more detail Freud's studies of hysteria, defending the latter's viewpoint. Admitting that hysterical symptoms yield readily to non-analytic treatment, it is pointed out that non-analytic types of treatment simply remove one symptom, and that sooner or later, another symptom of hysteria will appear. The hysterical patient who is treated by other methods than analysis responds by replacing one symptom by another; if the second symptom is removed a third will appear, and so on through a whole train of symptoms. Thus the illness itself is not cured, but finds new means of expression as soon as the old means is removed. The analytic treatment, on the contrary, deals with the personality of the patient and thus with the illness

itself. If analysis is successful, there is a new integration of personality, the patient is restored to health, and the hysterical symptoms do not recur as they do after other kinds of treatment.—*P. Blanchard* (Philadelphia Child Guidance Clinic).

3605. Popov, E. [On the question of a special kind of exogenous reaction type.] *Sovetskaya Psychoneurologia*, 1931, No. 2-3, 75-80.—The author describes three cases of acute delirio-hallucinatory syndromes in predisposed persons.—*A. Yarmolenko* (Leningrad).

3606. Rosenstein, S. M. [The mental hygiene movement in the U.S.S.R. and its tasks in connection with social reconstruction.] *Zh. neuropatol. i psikiat.*, 1931, No. 1, 35-42.—*A. Yarmolenko* (Leningrad).

3607. Schlömer, G. *Leitfaden der klinischen Psychiatrie*. (Manual of clinical psychiatry.) (6th ed.) Munich: Müller & Steinicke, 1932. Pp. vii + 239. M. 4.00.—The manual is divided into a general and a special part. In the general part the physical and psychological methods of examination, the general symptomatology and the way to write a clinical history are treated. The special part treats the various mental diseases. The diagnosis follows essentially the Kraepelin school. The presentation of the individual disease entities begins each time with the plastic description of a case as it would be demonstrated in a clinic. In relation to this case the disease entity is developed and explained. Special emphasis is laid on the precise working out of the differential diagnosis. The book is written from the didactic standpoint. It aims to call up before the eye of the reader the disease picture so that a visual memory image is easily imprinted on the mind.—*G. Schlömer* (Berlin).

3608. Simson, F. [The therapeutic influence of the Pioneer organization upon different groups of potential psychopaths.] *Zh. neuropatol. i psikiat.*, 1931, No. 4, 69-74.—*A. Yarmolenko* (Leningrad).

3609. Speransky, A. D. *Epileptichesky pristup*. (The epileptic fit.) Leningrad: Medgiz, 1932. Pp. 95.—Experimental investigation of the spasmodic processes, provoked by freezing a section of the brain cortex, and other mechanical irritations, has shown that status epilepticus is caused not only by toxemia, but by a disturbance of processes of the nervous system, the breaking of its rhythm. If the irritation amounts to a certain strength, the process caused by it gives rise to the characteristic traits of an epileptic fit, repeating itself to the point of exhaustion.—*A. Yarmolenko* (Leningrad).

3610. Tanturri, V. *In di un caso non comune di neurosi funzionale dei muscoli della fonazione*. (An uncommon case of functional neurosis involving the muscles of phonation.) *Valsalva*, 1932, 8, 60-70.—A young employee has a trembling, broken, bleating voice, combined with trembling of the muscles of the thorax, the larynx, and the pharynx. The subject has a diminished total respiratory capacity, is asthenic and easily exhausted, suffers from occasional

attacks of somnambulism, and exhibits the phonetic trouble only when there is voluntary instigation of speech, the muscles in question exhibiting quite normal contractions in their automatic functioning. The author, after examining the various morbid states in which there is trembling of the vocal cords, posits a diagnosis of dysfunction of phonation related to uncoordinated nerve impulses of cortical origin (hysterical syndrome) in an abnormal organism (endocrino-sympathetic dysfunction).—*R. Calabresi* (Rome).

3611. Volkov, S. P. [On the "localized feeling of anxiety" in epileptics.] *Sovetskaya Psychoneurologia*, 1931, No. 2-3, 80-86.—The author presents his four cases in the light of the casuistics of the new symptoms observed by Minor and published by him at the end of 1929 as "the localized feeling of anxiety in many epileptics."—*A. Yarmolenko* (Leningrad).

3612. Vyaznovski, A. I. [Sprue psychosis.] *Zh. neuropatol. i psikiat.*, 1931, No. 3, 35-43.—*A. Yarmolenko* (Leningrad).

3613. Wähle, R. *Grundlagen einer neuen Psychiatrie: eine Lesebuch für Laien, Studenten, und Forscher*. (Fundamentals of a new psychiatry: a textbook for the laity, students, and research workers.) Vienna: Steyrmühl, 1931. Pp. 87. Schilling 8.00.—This book was stimulated by the fact that there is no untechnical exposition of psychiatry. It tries to explain the nature of the different mental diseases on a physiological basis. Unnecessary material, such as psychoanalysis, which hinders such an explanation, has been discussed previously in *The Origin of Character* (1928, Munich), and in this book also it suffers some critical illumination. Positive, profitable work would be impossible, however, without a foundation of elementary untechnical psychology. The author shows that all the current conceptions, such as judgment, feeling, and will, correspond to a series of simple representations and bodily sensations. A further fundamental assumption is a biological attitude toward brain functions. Meynert advanced a related idea, viz., that every representation was a small, vanishing deposit belonging to a group of ganglion cells. This book is founded on the theory that every sensory experience is related to almost the whole of its special cortical field. The author's thesis rests on a mechanism of reproduction. The mental diseases with their multitude of clinical manifestations are considered from this point of view. The psycho-physiological definitions and comprehensive proof of the nature of each psychiatric type are given.—*R. Wähle* (Vienna).

3614. Wynn, W. H. v. *Körperlich-seelische Zusammenhänge in Gesundheit und Krankheit. Ein Beitrag zur medizinischen Psychologie*. (The relationship of body and mind in health and disease; a contribution to medical psychology.) Leipzig: Thieme, 1931. Pp. 128. M. 6.50.—The book treats of the structure of the organism from the standpoint of the two systems, "animal" and vegetative, the

function of the "animal" being to relate the individual to the environment, while the purpose of the vegetative system is the internal building up of the cells and organs. Special stress is laid on the newer researches which appear to show that the vegetative system influences, through innervation, the central nervous system, in the sense of directing the readiness of the "animal" system. The psychic functions and the vegetative system are especially closely bound together through the mechanism of the conditioned reflexes and in the field of the emotional life. The influence of vegetative processes is clearly recognizable in the constantly changing emotional states, and on the other hand emotion always affects organs innervated by the vegetative system. The moods arising from the different layers of the emotional life form a link between the emotional experiences of the psychic personality and the vital feelings depending on organic processes. Expressive phenomena include not only the entire demeanor of the body and facial expression, but also the organs innervated by the vegetative system. In addition to the whole organism, the environment is also the field of expression for emotional experiences. In the symptomatology of the neuroses this factor plays a great rôle, in that the outward expression of every preformed physiological mechanism serves as a method of procuring value for itself. Even in determining the form of certain symptoms in organic diseases, the factor of expression plays a rôle. One section of the book is devoted to the presentation of these views, using as an illustration the relationships between the heart and the psyche. In conclusion, the phenomenon of sickness is discussed in its relation, on the one hand, to the age, life-history, and environment of the patient, and on the other, to disturbances of organic function and especially the psychic effect due to the kind of illness.—W. H. v. Wyss (Zürich).

[See also abstracts 3473, 3491, 3556, 3671, 3709.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

3615. Antlbon, A. *Grafica dei movimenti dell'occhio nella scrittura*. (Record of the movements of the eye during writing.) *Boll. d'ocul.*, 1931, 7, 726-732.—Just as for reading, the diagrams obtained by the pneumatic method give a reproduction of eye movements during writing, which are different according to whether known or unknown phrases are written, whether expressions are written which are more or less easily completed, and whether one writes slowly or rapidly. From similar results it can be determined whether one has written with the eyes closed.—R. Calabresi (Rome).

3616. Barnard, B. An experiment in testing music capacity. *Music Suprv. J.*, 1932, 18, 54; 56.—The Kwalwasser-Dykema music tests were given to students from the fourth through the eighth grades. In general there was an increase in score with an increase in school year. Children who were untrained musically (no lessons, either class or individual)

scored reliably lower than those who had taken music lessons.—P. R. Farnsworth (Stanford).

3617. Bean, C. H. An unusual opportunity to investigate the psychology of language. *J. Genet. Psychol.*, 1932, 40, 181-202.—Observations were made on the stages of language learning in a child possessing musical talent and with congenital cataracts removed at 18 months, leading to almost normal vision in later infancy. A running description includes references to: earliest distinct sounds, vowels before consonants, fretting sounds more frequent than happy, first smiles, beginnings of gestures and of facial expressions, "rhemes" (Chamberlain), vocabularies at different ages, appearance of pronouns, of persons, gender, and number, adjectives and adverbs, generalizations, sentence building, etc.—J. F. Dashiell (North Carolina).

3618. Biddle, W. W. A psychological definition of propaganda. *J. Abn. & Soc. Psychol.*, 1931, 26, 283-295.—Propaganda relies less upon techniques which help the individual to come into intelligent control of his conduct, and more on techniques which induce the individual to follow non-rational emotional drives. The four principles followed in propaganda are: (1) rely on emotions, never argue; (2) cast propaganda into the pattern of "we" versus an "enemy"; (3) reach groups as well as individuals; (4) hide the propagandist as much as possible.—C. H. Johnson (Boston Psychopathic Hospital).

3619. Bogardus, E. S. What race are Filipinos? *Sociol. & Soc. Res.*, 1932, 16, 274-279.—Laws in 14 states forbid intermarriage between Caucasians and Mongolians. The question is raised whether or not Filipinos are Mongolians. They are a people on the move racially, from Mongoloid toward Caucasoid, still colored by an ancient tinge of negroid. Factors other than ancient racial relations should determine fitness for marriage.—J. R. Hülgaard (Yale).

3620. Bryk, F. *Die Beschneidung bei Mann und Weib. Ihre Geschichte, Psychologie und Ethnologie*. (Circumcision in man and woman. Its history, psychology and ethnology.) Neubrandenburg: Feller, 1931. Pp. x + 319. M. 14.50.—This is the first volume of a series of monographs edited by F. Bryk and C. L. Hansen. The material contained in it was collected and written from a critical point of view. The contradictions between the various attempts at explanation which have been offered are placed face to face, their untenableness clearly pointed out and an easily understood explanation presented. Bryk considers circumcision primarily as a biological problem, but, because it concerns both man and woman, a sexual-biological problem. He begins by examining the constitution and morphological structure of the male and female genital organs and their functions. In this way he arrives at the conclusion that the male genital organs have become inadequate in their functioning; this inadequacy of function has psychological effects and often leads to mental depression. The author then proceeds to a consideration of the prepuce and clitoris

complexes, which play an essential rôle in the mental life of mankind from the awakening of the vital drives to the appearance of the precursors of impotency. This is of great importance to the practitioners of psychotherapy; Bryk points in this connection to the cure of *ejaculatio praecox* by circumcision. The removal of the prepuce brought about the removal of the complex, displacing the erogenous zone rootwards and delaying the ejaculation, in the male; in the female, by the excision of the clitoris the erogenous zone was transferred backward from the vulva. A consideration of the general psychological factors which control the circumcised as well as the uncircumcised leads the author to a consideration of the original motive for circumcision, and into the field of the study of cultures from which circumcision sprang and in which it obtained its special connotation. The magical-religious aspect, with its teleological connotations, stands in the foreground. Circumcision is only one of many interferences with human genitals, and Bryk considers it necessary to examine all of these, for they are all related to circumcision. He describes fourteen bloody and bloodless operations upon the male member, from the simplest form of bloodless removal of the prepuce to the very painful *mika* operations, castration in the Orient and the operations performed on the Vatican singers. The author describes operation techniques, experiments made in stopping the blood, the after-care, and the use of fire, stone and metal tools for circumcision operations by primitive peoples. The history of cultures shows the dissemination and naturalization of these usages and of the recurring declines of circumcision (e.g., in the case of the Jews). To how great an extent circumcision has affected all rules of art the author shows in the section *Circumcision in Art*.—H. C. Groetschel (Berlin).

3621. Buhrig, W. *Bijdrage tot de psychologie der handteekening*. (Contributions to the psychology of the signature.) *Tijdschr. v. wetensch. graphol.*, 1932, 4, 2-4.—After an introduction discussing the graphic forms of signature in general, Buhrig presents a graphological analysis of the signature of an Indian merchant.—E. M. Püpel (New York City).

3622. Cowley, W. H. *The traits of face-to-face leaders*. *J. Abn. & Soc. Psychol.*, 1931, 26, 304-313.—This study follows a previous one appearing in the same journal on *Three Distinctions in the Study of Leaders*. From the data secured, the author chose to study the face-to-face type of leadership as the most amenable to investigation. Twelve psychological tests were given to 112 subjects consisting of criminal leaders and followers, non-commissioned officers and privates in the United States Army, and student leaders and followers. The following six traits were isolated which were common to the three groups of leaders studied: (1) leaders rated themselves higher in self-confidence, (2) leaders scored higher in motor impulsion, (3) leaders took an appreciably shorter period of time than their followers to determine whether or not their decisions would stand, (4) leaders took a shorter period of time to

arrange a set of mottoes about tact, (5) leaders took a shorter period of time to call out the length of lines on a pack of 70 cards, (6) leaders took a shorter period of time to arrange a set of mottoes about aggressiveness.—C. H. Johnson (Boston Psychopathic Hospital).

3623. Del Greco, F. *Il maggior problema della psicologia criminale*. (The major problem of criminal psychology.) *Riv. di psicol.*, 1932, 28, 1-11.—T. M. Abel (Sarah Lawrence).

3624. Dickinson, E. L., & Beam, L. *A thousand marriages*. Baltimore: Williams & Wilkins, 1931. Pp. xiv + 482. \$5.00.—The life-long practice of the senior author, a gynecologist, is summarized by the junior author under his direction, with special emphasis upon the correlation between anatomical findings and sex experience; the latter, in the majority of cases, was obtained from confidences of the patient at crises. Most of the patients were seen over a number of years. The material is grouped under such chapter headings as Brides, Frigidity, Passion, etc., and at the end of the interpretative material of each chapter a representative sample of the case histories is presented.—R. R. Willoughby (Clark).

3625. Flatow-Worms, E. *Handschrift und Charakter. Kompendium der wissenschaftlichen Graphologie*. (Handwriting and character. A compendium of scientific graphology.) Berlin, Vienna: Urban & Schwarzenberg, 1931. Pp. 164. Rm. 8.—A popular introduction to the problem of graphology and the principal methods of interpreting writing, with numerous illustrations. Graphology has two tasks: (1) description, as of an entirely empirical process, and (2) interpretation, with which the graphologist must be satisfied if he, for example, has found constitutional types from which he determines through his understanding of the individual character of a person his behavior and emotional reactions. A third task consists in finding and establishing invariable relationships between handwriting characteristics and personal peculiarities. The third task represents the really scientific part of graphology.—P. Plaut (Berlin).

3626. Fritz, P. *Die Schlechtleistung im besondern Teil des Schuldrechts*. (Defaulting in the special section of the debt law.) Karlsruhe: Macklische, 1931. Pp. 132. Rm. 3.50.—The book deals with the legal procedures which according to civil law are instituted if a debtor "defaults," i.e., inadequately discharges an obligation.—P. Fritz.

3627. Galli, E. *La coscienza nella formazione dell'opera d'arte*. (Consciousness during the creation of works of art.) *Riv. di psicol.*, 1932, 27, 107-114; 185-193; 275-284.—T. M. Abel (Sarah Lawrence).

3628. Ghislain-Houzel, —. *De wetenschappelijke grondslagen der graphologie*. (The scientific basis of graphology.) *Tijdschr. v. wetensch. graphol.*, 1932, 4, 5-7.—The author maintains that graphology, with its empirical methods, is still in the darkness of

the middle ages. In order to progress it needs philosophical reflection and experimentation. Graphology is following in the footsteps of medicine, which has long been studying posture and gesture and drawing conclusions from them. Disease is revealed in the movements of the hand. We know from anatomical and clinical experience what disease is involved. It is the hand that writes, and therefore handwriting ought to be able to reveal the disease. As for the healthy man—if anyone can be said to be completely healthy—handwriting reveals his way of reacting, in which character is a factor. On the basis of the study of the so-called internal secretions the author opposes to the old classification of temperaments the following types: the thyroid, the adrenal, the hypophyseal, and the genital—types whose traits he describes in detail. He also distinguishes mixed types. Each of these types, in connection with the predominance of a certain gland, yields a different handwriting. The handwriting also reveals hyperfunction or insufficiency of glandular secretion. The author has shown that the activation of the genital gland in puberty and its disappearance in the menopause may cause the appearance of the twisted letter (*lettre tordue*) as a sign of physical imbalance. Since the physique of the writer also depends upon the functioning of the glands of internal secretion, it should be possible to learn to know this physique by studying the handwriting from the endocrinological point of view.—*E. M. Pilpel* (New York City).

3629. Hahn, H. *Psychotechnik und Sozialpolitik*. (Psychotechnics and social politics.) *Indus. Psychotechn.*, 1932, 9, 60-62.—The author discusses the different uses of psychotechnology in social politics; they are, in general, aptitude testing, analysis of social conditions, and political guidance.—*C. Burri* (Chicago).

3630. Harvey, O. L. The scientific study of human sexual behavior. *J. Soc. Psychol.*, 1932, 3, 161-188.—The writer first sets out certain requirements for scientific work, such as adequacy of sampling, constancy, objectivity, etc. He then lists four methods of direct and five methods of indirect observation, and points out the merits and inadequacies of each. Characteristic examples of each method in the study of human sexual behavior are indicated. In conclusion, he holds that the indirect method, that is, the method of personal report, is the more promising at present. Between the anecdotal procedure, which is often very suggestive but hardly scientific, and the laboratory method, which loses in fecundity what it gains in precision, stand the more usable case study, questionnaire, and psychoanalytic procedures. Of these, the last is the least satisfactory, and it would seem that a combination of case study with questionnaire probably yields the best results.—*E. B. Newman* (Frankfurt).

3631. Hawthorne, J. W. A group test for the measurement of cruelty-compassion: a proposed means of recognizing potential criminality. *J. Soc. Psychol.*, 1932, 3, 189-211.—A battery of 31 units is

presented in each of which five alternative sports, books, implements, etc., are presented which are to be placed in rank order by the subject. Each list contains one item of a particularly bloody or violent character. The sum of the ranks given to these items gives a score which is taken to be indicative of a predisposition to cruelty on the part of the individual. Results are given from two sets of juvenile delinquents as well as a group of normals and one of insane, tending to show that the delinquents give scores significantly different from those of the normal group. An inspection of the histories of some 35 cases with particularly low scores showed either evidence of violence or a tendency toward sadism, bullying disposition, or the like. The test has a reliability of .80, or .86 when three of the units are removed. A zero correlation with age and intelligence within the test groups was found.—*E. B. Newman* (Frankfurt).

3632. Hytler, J. *L'esthétique du drame*. (Esthetics of the drama.) *J. de psychol.*, 1932, 29, 74-104.—*N. L. Munn* (Pittsburgh).

3633. Ivanov, V. N. *Sozialisticheskii pioner-gorodok*. (Socialistic pioneer city.) Leningrad: Koubouch, 1932. Pp. 142.—This handbook for the organization of large permanent Pioneer Camps contains the results of the work of the "shock brigade" of the Institute of Child and Youth Health Protection of Leningrad. It contains instructions as to therapeutic and prophylactic measures, norms for sanitary organization, architecture and buildings, and principles for correct planning and building of these cities, which are the permanent form of the summer Pioneer Camps, in connection with the Pioneer movement. Pioneer leaders will find in it pedagogical advice, organization of the day and rest periods, gymnastics and club-work, and rules for food and diet. The book is dedicated to the tenth anniversary of the Pioneer movement.—*A. Yarmolenko* (Leningrad).

3634. Jones, D. *An outline of English phonetics*. (3rd ed.) New York: Dutton, 1932. Pp. 336. \$2.50.—(Not seen).

3635. Kroeber-Keneth, C. *Graphologie der Zahlenschreibung*. (Graphology of digit writing.) *Indus. Psychotechn.*, 1932, 9, 13-20.—The author maintains that in many cases the writing of digits expresses a person's emotional and character make-up better than does his handwriting. To prove his thesis he gives samples of digits from mathematicians and accountants. These two kinds of people seem to express their different vocational aspirations, the first type showing in the negligence with which they write digits that numbers have only conceptual meaning, while the adherence of the latter group to conventional standards of writing is the sign that to them numbers have intrinsic meaning. He also shows characteristics of digits produced by criminals which he thinks show significant criminological signs.—*C. Burri* (Chicago).

3636. Kuhlmann, W. *Die Tonhöhenbewegung des Aussagesatzes*. Experimental-phonetische Un-

tersuchungen. (Changes in pitch in conversation. An experimental phonetic research.) Heidelberg: Winter, 1931. Pp. 73. RM. 3.50.—This research extends throughout the gamut of colloquial German from the shortest to long sentences. Sentences in the form of questions were also used. The author was the experimenter. The oscillations of sound were caught in a funnel, carried to a membrane by means of a tube, registered by a lever on a drum, and with the aid of the Meyer-Schneider pitch instrument converted into tonal curves. The conclusions partially contradict some of the hitherto existing views. The whole of the speech melody was successfully reduced to the regular curve form. Definite syllables and groups of words and sentences have typical curves. Definite relations exist between the form of (1) the curves of syllables and those of phrases, (2) the curves of syllables and those of sentences, (3) the curves of phrases and those of sentences, (4) the curves of syllables, phrases and sentences and curves of accentuation by pitch, (5) curves of syllables, phrases and sentences and those of accentuation by intensity. The levelling down of the speech melody in consequence of accentuation (a peculiarity of the southern German dialect) and of a raising of the level (a peculiarity of northern German dialect) were remarkable. The intervals between separate syllables (up to 12 half-tones) and the range of the speaking voice (19 half-tones) are surprisingly great. The work contains 12 illustrations and a bibliography. The research will be continued.—W. Kuhlmann (Freiburg).

3637. Laforgue, R. Or et capital. Remarques psychanalytiques sur le régime capitaliste. (Gold and capital. Psychoanalytic remarks on the capitalistic regime.) *Rev. fr. de psychanal.*, 1932, 5, 154-165.—The evolution of civilization has been controlled by the same laws of libido organization as those which determine individual development. If we consider gold and its use in terms of discharge or repression of libido, in our modern society, we find that incurring debt rouses a feeling of guilt and paying a debt relieves the guilt. The desire to pay a debt is the passive, masochistic, feminine rôle; the exacting of payment is the sadistic, active, masculine rôle. Merchandise fluctuates in value, hence gold has a special position. Gold has attained an almost magic place and serves therefore to satisfy the instinct for power. Gold has long been associated with divinity and royalty, as in golden statues of the gods, the crowns of kings. Thus the possession of gold enables the possessor to participate in the divine and royal powers, in a capitalistic society; it probably did not do so in primitive societies. Libido has been withdrawn from social and religious relationships and transferred to gold. Especially have the infantile sado-masochistic eroticisms been transferred to it.—P. Blanchard (Philadelphia Child Guidance Clinic).

3638. Lenz, A. Das Wesen der kriminellen Einzelpersönlichkeit. (The nature of the criminal per-

sonality.) *Vjsch. f. Jugendkd.*, 1932, 2, 81-83.—R. R. Willoughby (Clark).

3639. Licht, H. Sexual life in ancient Greece. New York: Covici Friede, 1932. Pp. 572. \$12.50.—(Not seen).

3640. Lowie, R. H. Marriage and family life among the Plains Indians. *Scient. Mo.*, 1932, 34, 462-464.—J. F. Dashiell (North Carolina).

3641. Luria, A. R. Psychological expedition to central Asia. *J. Genet. Psychol.*, 1932, 40, 241-242.—A short description is given of the 1931 expedition (organized by cooperation between institutes of Samarkand and Moscow), which is to be followed by one in the summer of 1932. The aim was to investigate perceptual, thought, and other psychological processes in very primitive peoples, and to note changes therein that follow raising of economic and cultural levels. Special problems of methods presented themselves.—J. F. Dashiell (North Carolina).

3642. Margadant, S. v. Nog eens: het handschrift van Philips II van Spanje. (Once more the writing of Philip II of Spain.) *Tijdsch. v. wetenschap. graphol.*, 1932, 2, 46-53.—Since the author was not able to read the script of Philip II of Spain, reproduced in this periodical a year ago, he supposed that the cut must have been reversed. By turning the script over he thinks he overcomes all the difficulties. However, he gets a picture of Philip II that is entirely different from the historical character, his interpretation being corroborated only by material in the *Encyclopedia Britannica*. The editor adds a reproduction of the signature in connection with a few lines of script in order to disprove this assumption. The script appears quite legibly as "Yo el Rey." Signatures of Ferdinand of Castile and of his wife are given to illustrate actually illegible handwriting.—M. Rickers-Ovsiankina (Worcester State Hospital).

3643. McCormick, T. C. Rural intelligence and college achievement. *Sociol. & Soc. Res.*, 1932, 16, 259-266.—An urban index based on population of the nearest town, distance out from the town, years residence there, and age at entrance to college, was worked out for a sample of 200 freshmen of recent years in the East Central Oklahoma Teachers College. Coefficients of correlation between average grades, time spent in study, age at entrance, and the urban index, were all insignificant, save for a correlation of $.228 \pm .067$ between grades and time in study. With but little more effort the rural students equal the scholastic achievement of the urban students.—J. R. Hulgard (Yale).

3644. Menger, O. The social status of occupations for women. *Teach. Coll. Rec.*, 1932, 33, 696-704.—The social standing of occupations that are popular as choices and employments for women is determined by averaging the rank order given 35 listed occupations by 704 persons from widely diversified groups, including both men and women, juniors and adults, workers and students, persons from various sections of the country, etc. Physician, lawyer,

and dentist are the occupations highest in social status. Actress ranks 13, while personnel director ranks 14. Home-maker, on which agreement was least, ranks 16. Maid, houseworker, laundress, and scrub-woman are given the lowest ratings.—J. M. Stalmaker (Chicago).

3645. Mursell, J. L. Psychology of music. *Psychol. Bull.*, 1932, 29, 218-241.—258 titles are reviewed under the headings: tonal attributes; musical rhythm; consonance and interval; melody, scale, and key; musical emotion, listening and appreciation; learning; singing; music tests; psychology of the musician. These studies are experimental for the most part, but also include theoretical, biographical, bibliographical, and a few on general testing.—J. F. Dashiell (North Carolina).

3646. Rochlin, L. Trud, bit i sderowie partactiva. (The work, surroundings and health of the active members of the communist party.) *Ukrain. psikhonevrol. instit.*, 1931, 17, 1-152.—The results of a research into the living conditions and material and social surroundings of active communists, obtained by an anonymous investigation.—A. Yarmolenko (Lenin-grad).

3647. Rosenquist, C. M. Linguistic changes in the acculturation of the Swedes of Texas. *Sociol. & Soc. Res.*, 1932, 16, 221-231.—The Swedish spoken by the Swedes of Texas has been much modified by the acceptance of English words and by conspicuous changes in pronunciation. Study of the names given children in successive generations reveals gradual Americanization. American names are added, distinctively Swedish names become fewer, and the spelling of names begins to conform to American practice.—J. R. Hilgard (Yale).

3648. Schenck, C. M. Het handschrift van stotteraars. (The handwriting of stutterers.) *Tijdsch. v. wetenschap. graphol.*, 1932, 4, 54-60.—Schenck finds in an analysis of 25 cases of the handwriting of stutterers the same phenomena that Ramón Goldzieher had reported in the *Zeitschrift für Kinderforschung*, viz., a low form-level (*Formniveau*), repetition of words and of syllables, non-rhythmical and excessive pressure, small and close letters at the end of a line, writing one letter over the other, ataxic symptoms, and slow non-automatic writing. However, the author warns us not to consider these results too seriously, since she found the same phenomena in the handwriting of persons who did not stutter. This fact is illustrated by several examples.—M. Rickers-Ovsiankina (Worcester State Hospital).

3649. Schneickert, H. Verzameling van pathologische Handschriften. (Collection of pathological handwritings.) *Tijdschr. v. wetenschap. graphol.*, 1932, 4, 12-13.—This is a discussion of a means of classifying pathological handwritings. This classification must be made in such a way that it will be easily possible at any time to find the handwritings which show changes due to any given internal or external pathological conditions.—E. M. Pilpel (New York City).

3650. Schücker, A. Zur Psychopathologie der Frauenbewegung. (On the psychopathology of the woman movement.) Leipzig: Kabitzsch, 1931. Pp. 51.—Contents: economic conditions, surplus of women, oppression of women, and feminism are not primary causes of the woman movement; female temperament and female character are biologically conditioned; their dependance on biotonus; what is understood by the woman movement. History of the woman movement; its representatives are all well known types psychologically and morphologically. Attempt at a female expression psychology; modern representatives of the emancipation in the light of Kretschmer's constitution theory. Social necessity was first alleged also as the basis of the already existing emancipation struggle. Surplus of women likewise cannot be considered as the fundamental cause, for it stands in no directly observable relationship to the woman movement (there have been times when there was a great surplus of women and no woman movement). Social need and surplus of women are not causes but weapons of the woman movement. The roots of the emancipation are psychopathological (masculine and infantile women); they are signs of a declining culture. The woman movement rests, furthermore, on a sex egotism cherished by individuality.—A. Schücker.

3651. Shujrer, F. Graphologische ontleding van het handschrift van den dichter, Maurice de Guérin. (Graphological analysis of the handwriting of the poet Maurice de Guérin.) *Tijdsch. v. wetenschap. graphol.*, 1932, 2, 1-45.—In connection with Johanna M. v. Wouden-Veldkamp's character study of the late Maurice de Guérin, the author gives an analysis of his handwriting. This analysis is preceded by summarized material concerning the poet collected by J. M. v. Wouden-Veldkamp on the Heymans questionnaire.—M. Rickers-Ovsiankina (Worcester State Hospital).

3652. Squires, P. C. The law as a major field for psychological research. *J. Abn. & Soc. Psychol.*, 1931, 26, 314-323.—The law, faced today by increasingly intricate problems of human adjustment brought about by a social environment ever growing in complexity, requires all the help that can be derived from modern psychology. In the administration of the law the humanistic point of view is presumed to be in control. The weighty task of distributing justice to the members of society presents an unsurpassed challenge that demands a breaking down of artificial barriers erected by tradition between the law and a psychology bent on carrying out its researches under a social and scientific attitude.—C. H. Johnson (Boston Psychopathic Hospital).

3653. Streletski, C. Endocrino-graphologie. (Endocrino-graphology.) *Tijdschr. v. wetenschap. graphol.*, 1932, 4, 8-11.—It was Leopold Levi who first thought of using graphology for studying in retarded children the relation between their condition and any anomalies in the internal secretions, and to determine what improvements in their condition were

brought about through the aid of glandular treatment. The expression "endocrino-graphology" was invented by the present author, who studied the neuro-psychiatric changes and the concomitant changes in handwriting which appeared when he modified the internal secretions by using certain therapeutic measures. The author presents in detail the changes in handwriting which were brought about in this way in two children and which indicate corresponding modifications in character. On the basis of these experiments the author attempts to distinguish the different graphic signs which accompany the changes in the various glands of internal secretion in the direction of excess or of deficiency. He gives examples of the handwritings of a hyperthyroid, a hypothyroid, and a hypoadrenal. The twisted letter (*lettre tordue*) occurs not only in ovarian insufficiency but also in parathyroid insufficiency. Since the functioning of the glands of internal secretion is very complex and since the action of the products of internal secretion is still not well known, these data must be very cautiously interpreted.—*E. M. Pilpel* (New York City).

3654. Vidoni, G. Riferimenti medici nel campo della criminalità. (Medical reports in the domain of criminality.) *Rinascimento med.*, 1931, 10, 1-20.—Applications are offered in the domain of criminality of the concepts of constitutionalistic medicine, which follows the orientation of the anthropological school. Crime is considered as a malady caused by the occasion (the external stimulus) in an individuality which presents certain mental, morphological, and physiological peculiarities. The classification of delinquents is a necessity, just as is the classification of diseases; however, one must always try to take into consideration the individual delinquent, just as one considers each disease in particular.—*R. Calabresi* (Rome).

3655. Weber, W. Wissenschaftliche psychologische und psychotechnische Forschungsergebnisse als Wiederaufnahmegründe im Strafverfahren. (Scientific psychological and psychotechnical findings as grounds for retrial in criminal cases.) *Indus. Psychotechn.*, 1932, 9, 27-30.—The author maintains that newly discovered scientific facts in fields such as psychology, where changes in point of view and knowledge of facts are constantly occurring, should be applied to criminal cases. Such changes, if they reveal important factors in a defendant's favor, and if they have been made since his conviction, should justify a retrial.—*C. Burri* (Chicago).

3656. Wells, C. D. Religious personality types. *Sociol. & Soc. Res.*, 1932, 16, 232-241.—Religious personality types are classified as fundamentalist, modernist, progressive; if inactive, as backslider, heretic, individualist. The characteristics and interrelations of these types are clarified by definition and illustration.—*J. R. Hildgard* (Yale).

3657. Whitley, M. T. A comparison of the Seashore and the Kwalwasser-Dykema music tests. *Teach. Coll. Rec.*, 1932, 33, 731-751.—After a gen-

eral comparison of the two music tests as to construction, recording and scoring, validity, experience necessary to give the tests, and a direct comparison of the five comparable sections of the two tests (pitch, intensity, time, rhythm, and memory), a report of a reliability study based on results from 794-883 persons is given. The Seashore test is of much greater reliability. The Kwalwasser-Dykema test appears too easy, selected groups of music students making almost perfect scores. A bibliography of 10 references is given.—*J. M. Stalnaker* (Chicago).

3658. Willoughby, R. B. The functions of conversation. *J. Soc. Psychol.*, 1932, 3, 146-160.—The writer discusses the material contained in twenty replies which were returned in answer to a questionnaire about conversation sent to fifty superior adults. Only a few of these were able to analyze very adequately what they considered to be the purpose of adult conversation. The most widely recognized motive was that of domination or display, the ego motive which is held in check only by social conventions. On the other hand, others recognized that the give-and-take character of conversation and its transference function are also of importance. In any case a distinction should be drawn between light and playful as opposed to more serious, and possibly creative, conversation.—*E. B. Newman* (Frankfurt).

3659. Young, K. Social psychology and social reform. *Scient. Mo.*, 1932, 34, 252-258.—The urge to improve the world is a phrase of our present-day culture and depends upon the doctrines of progress and of good and evil. Social psychology must take account of the organic, the personal-social, and the cultural, and must give primary recognition to the emotional-feeling side of human nature.—*J. F. Dashiell* (North Carolina).

[See also abstracts 3468, 3538, 3556, 3580, 3726, 3732, 3735, 3747, 3767, 3795.]

INDUSTRIAL AND PERSONNEL PROBLEMS

3660. Bergami, G. Il problema delle regolazioni ottiche ed acustiche dal punto di vista psicotecnica e in rapporto al problema dei rumori. (The problem of visual and acoustic signals from the psychotechnical point of view and in relation to the problem of noise.) *Atti 2 Cong. Soc. Ital. med. soc.*, 1932, "La psicotecnica applicata alla prevenzione degli infortuni stradali." Pp. 57.—The author examines separately the signals that the road provides for vehicles and the signals of the vehicles to other vehicles and pedestrians. In the first category are comprised: (1) the signals which regulate traffic in the towns (the author finds preferable to all others the automatic system, which, however, requires some further improvement); (2) signs for which one must study the setting, the height of the sign, the form, the color, the content (pictures, words, letters, symbols, etc.), distance, and interval necessary to make them surely visible and intelligible even at night; (3) the signals for open and covered railway crossings; (4) the signals for laborers, etc. Under the second category

visual and acoustic signals are distinguished. After some observations concerning the visual signals of direction, stops, reverses, etc., uniformity and spread of which are desirable, the author passes to the consideration of the problem of acoustic signals, which must meet quite different conditions in the country and in the towns. In the cities the acoustic signals must be clearly distinguishable above the accompanying rumble of traffic, must lack those disagreeable characteristics of intense stimuli which are capable of producing confusion in those who hear them, and must have a limited intensity in order to avoid increasing the general noise. On the basis of these experiments and observations which he reports the author comes to the conclusion that the problem of auditory signals in the cities would find a rational solution in a decrease of the intensity of signals rather than by the choice of a lower frequency, since the sounds of more than 250 vibrations are more easily distinguishable above the general noise of the town and possess a lower threshold value, which permits perceptibility with a very low intensity.—*R. Calabresi (Rome)*.

3661. Bingham, W. V. *Making work worth while*. Chicago: Univ. of Chicago Press, 1932. Pp. 10.—A radio discussion of the rôle of psychology in industry.—*N. L. Munn (Pittsburgh)*.

3662. Boveri, P., & Ciampolini, A. *Il certificato medico per l'abilitazione alla guida di autoveicoli. I fattori morbosi predisponenti all'infortunio stradale nei guidatori di autoveicoli*. (The medical certificate for the qualification of drivers of motor vehicles. The morbid factors predisposing to highway accidents in drivers of motor vehicles.) *Atti 2 Cong. Soc. Ital. med. soc.*, 1932, "La psicotecnica applicata alla prevenzione degli infortuni stradali." Pp. 49.—The authors examine the sensory and psychophysical defects which predispose toward accidents (defects of sight and of hearing, diseases of the nervous system, cardiopathies, hypertension, alcoholism, etc.) and judge that a medical certificate given by a responsible board is necessary not only for the personnel of public services but for all drivers; that sometimes in the case of probable symptoms of a progressive malady a conditional certification *pro tempore* must be given and visits repeated at established intervals; and that, in consideration of possible mental and physiological compensatory factors and the change which dispositions may undergo with exercise, a continuous and severe control must be required.—*R. Calabresi (Rome)*.

3663. Cassaniga, A. *Il pedone nel determinismo degli accidenti stradali*. (The pedestrian in the determination of accidents on the road.) *Atti 2 Cong. Soc. Ital. med. soc.*, 1932, "La psicotecnica applicata alla prevenzione degli infortuni stradali." Pp. 14.—The pedestrian is never the principal cause of an accident, and most often there is no true guilt on the part of the pedestrian. Since we quite often find abnormal psychic and somatic conditions, we must always control conditions in order to estimate the responsibility of drivers. The limitation of speed

of vehicles is the most efficacious means of prevention of accidents, even those which are in part determined by the behavior of the pedestrian.—*R. Calabresi (Rome)*.

3664. Chant, S. N. P. *Measuring the factors that make a job interesting*. *Person. J.*, 1932, 11, 1-4.—This paper illustrates the applicability to personnel problems of one of Thurstone's methods for the measurement of attitude and opinion. The method is employed for measuring the relative importance of twelve selected factors pertaining to any job for a group of male employees between the ages of seventeen and twenty-one. The assumption is made that the degree of importance assigned to any factor in a job will be commensurate with its effectiveness as an agency for arousing and sustaining the employee's interest in his job. Suggestions are made relevant to the value of the results in vocational guidance and in training supervisors.—(Courtesy *Person. J.*)

3665. Corberi, G., & Massorotti, V. *La selezione dei conduttori di veicoli rapidi*. (The selection of drivers of rapid vehicles.) *Atti 2 Cong. Soc. Ital. med. soc.*, 1932, "La psicotecnica applicata alla prevenzione degli infortuni stradali." Pp. 53.—The account comprises a general section and a special section. In the former there is a brief history of the application of psychotechnics in the selection of drivers of rapid vehicles and an exposition of the methods followed (methods of Münsterberg, Traum, Stern, Lahy, Mira, Moede-Piorkowski, etc.), in particular that practised by the Azienda Tramviaria di Milan; in this there is given the distinction between the analytical and synthetical methods, of which the former are judged as superior, and the author states that the attitudes required for the personnel in question are psychophysical, sensory, and mental attitudes (attention, reaction time, emotivity, estimation of velocity of moving objects and estimation of distances, intelligence, technique, etc.). The second part is an account of the work accomplished in the psychotechnical laboratory of the Azienda Tramviaria di Milan and the positive results which selection has given. The authors propose that a somato-neuro-psychological examination be obligatory for all drivers of rapid vehicles and that a technical commission establish the types of examination for the different categories of drivers.—*R. Calabresi (Rome)*.

3666. Diez Gasca, M. *Preselezione di candidati per la verifica delle schede del censimento*. (Pre-selection of candidates for the verification of census lists.) *Organizz. sci.*, 1932, Nos. 1-3, 11.—For the task of verification the author judges as necessary qualities rapidity of visual discrimination, rapidity of visual perception, good attention with association and resistance to distraction, a good attitude of association and of transposition (words, symbols, numbers, etc.), good motor ability, and a tendency toward automatism. The author establishes tests for the general analytical examination of psychomotor functions and of intellectual functions and for the analytical and synthetic examination of psychomotor

functions. From the results an arithmetical and psychotechnical evaluation is given.—R. Calabresi (Rome).

3667. Eliasberg, W. Bericht über den VII. Internationalen Kongress für Psychotechnik. (Report on the 7th International Congress for Psychotechnics.) *Psychotechn. Zsch.*, 1932, 7, 18-24.—Psychotechnologists are developing their interests in two definite directions: (1) toward improving working conditions and increasing the efficiency of workers, and (2) toward an understanding of the workers, their needs, wants and motives.—C. Burri (Chicago).

3668. Engel, R. Arbeitstudie zur Einführung von Fließarbeit. (Work studies for the introduction of serial work.) *Indus. Psychotechn.*, 1932, 9, 31-55.—In order to learn what kind of serial work would give best results in painting patterns on china plates, a work study was made in which several methods of work were tried out. The author also studied the effect of restricted versus free time, and found that a certain degree of restriction raised the output, while beyond this optimum level there was too much waste and lowering in quality of work. In general, serial work in which a given worker did only one part of the pattern showed greater output than when a given worker painted the whole pattern.—C. Burri (Chicago).

3669. Engel, R. Zeitsuschläge bei freier und gebundener Handarbeit in der Massenfabrikation. (Time saving by free and controlled manual labor in mass production.) *Indus. Psychotechn.*, 1932, 9, 87-92.—In order to find out about the effectiveness of serial work the author made a detailed study of the effect of different sizes of work series on output and quality of work. Engel's main problem was to find a general function which would express the change of time for a given change in the work series. The following equation seems to give the best results: $Zg\% = 6(3/tgr)$, where tgr is the original time which is needed to finish a task with unlimited time, and Zg is the change of time for a given change in condition.—C. Burri (Chicago).

3670. Filippini, A. Ferrovie ed infortuni stradali. (Railroads and highway accidents.) *Atti 2 Cong. Soc. Ital. med. soc.*, 1932, "La psicotecnica applicata alla prevenzione degli infortuni stradali." Pp. 20.—It has been found that the signaling systems which are employed for the prevention of accidents at railroad crossings are of little value; in particular, more accidents occur when the crossings are closed with bars. Belief is expressed in the utility of ordinances which require vehicles to stop at railway crossings. The ability of the driver to make rapid and timely decisions may sometimes prevent accidents and decrease their seriousness, hence the desirability of psychotechnical selection of personnel. The authors, having examined the conditions under which the driver does his work, and the methods followed in his selection, note the importance of some points heretofore little regarded: in particular they believe that we should require the capacity of prolonged at-

tention which resists monotony, that we must avoid too specific examinations and prefer the examination of a complex of functions, and that we must consider as of secondary importance the test of appreciation of speed.—R. Calabresi (Rome).

3671. Finkel, I. Z., & Ponizovskaya, A. S. [The nervous system in mechanized agricultural work.] *Zh. nevrolog. i psikiat.*, 1931, No. 6, 89-102.—A. Yarmolenko (Leningrad).

3672. Flachsbar-Kraft, F. Beitrag zur Analyse fortlaufender Arbeiten mit und ohne Zeitzwang. (Contribution to the analysis of continuous work with and without time constraint.) *Arch. f. d. ges. Psychol.*, 1932, 83, 467-518.—An analysis of the influence of an enforced as compared with a voluntary rate of working, on the performance of various types of tasks. Three types of work were studied: a simple, comparatively coarse motor task; a more delicate mental task; and a third simple mental task. The study shows that changes in the rate of working produce effects which are a function of the individual type of work and the characteristics of the subjects. If the subject can "feel" the rhythm, the rate of work can be increased without detriment to the quality of the performance. On the other hand there are some individuals who cannot "feel" the rhythm and for them an increase in the rate of work is accompanied by decreased quality of performance. The more delicate the type of task, the less can the speed be increased without decrease in quality. Emotional and other disturbances are more detrimental to the more delicate type of work. The investigation was made in the interest of its industrial application.—R. H. Waters (Arkansas).

3673. Frear, G. W. Psychology for morticians. *Mortuary Management*, 1932 (May), 20-21.—The third and last part of an article stressing adequate attention to the therapeutic aspects of the subject.—R. R. Willoughby (Clark).

3674. Gemelli, A., & Ponzo, M. I fattori psicofisici predisponenti all'infortunio stradale e le prospettive di organizzazione psicotecnica preventiva. (The psychophysical factors predisposing toward highway accidents and the outlook for preventive psychotechnical organization.) *Atti 2 Cong. Soc. Ital. med. soc.*, 1932, "La psicotecnica applicata alla prevenzione degli infortuni stradali." Pp. 66.—The authors, after having ascertained that the causes which aggravate the phenomenon of road accidents are to be sought in a lack of adaptation of the crowd and of individuals to new systems of locomotion, determine the situations in which psychic factors act as predispositions toward accidents. They take into consideration particularly the instinctive tendencies which are revealed and are prevalent in habitual human behavior (the tendency toward least effort, the preference and dominance of the right side over the left, etc.) which sometimes oppose traffic regulations. To these causes of accident are added incompleteness of adaptation, persistence of attitudes which should be changed rapidly, individual inclina-

tion, ignorance of danger of modes of conduct and of incompetent personnels, and the lack of a sense of duty, above all in drivers of very rapid vehicles. They give an outline of forms of social organization prophylaxis for road accidents from the psychotechnical point of view.—*R. Calabresi* (Rome).

3675. Gini, C., & De Bernardinis, L. *Notizie statistiche sugli infortunati per accidenti stradali.* (Statistical information regarding fatalities following accidents of the road.) *Atti 2 Cong. Soc. Ital. med. soc.*, 1932, "La psicotecnica applicata alla prevenzione degli infortuni stradali." Pp. 63.—The information relates to the deaths caused by road accidents in the entire kingdom from 1919 to 1929. It takes into consideration separately the accidents which occurred in the various provinces and those in the large cities, and distinguishes them according to age, sex, type of vehicle, time of year, and presumed or confirmed causes. The authors conclude that in order to prevent road accidents we must work toward the education of pedestrians, care of the aged and children, and the limitation of speed in residential sections, and that we must enforce the most strict observance of rules, the rigorous selection of conductors and inspection of their behavior, their mental and physical condition, and the duration of their work.—*R. Calabresi* (Rome).

3676. Goldstine, E. N. *Safety inspection report form.* *Person. J.*, 1932, 11, 24-27.—The continued prevalence of high accident frequency rates in many industries and industrial plants, while others with comparable conditions are making remarkable progress, indicates that superficial methods and interest do not produce sufficiently satisfactory results. Successful promotion of safety requires regular and frequent inspection of a high standard, immediately followed by the necessary steps to eliminate or reduce dangerous hazards wherever possible. The safety inspection report form described has been made the keystone of a comprehensive plan for accident prevention.—(Courtesy *Person. J.*).

3677. Kudrjavzev, N. *Rabota i utomlenie.* (Work and fatigue.) *Ukrain. psikhonevrolog. instit.*, 1932, 21. Pp. 130.—Fifteen articles are devoted to different objective methods of investigation of occupational fatigue and its results. The aim of the investigation was the definition of the change in the physiological functional stability of the organism after physical and mental work.—*A. Yarmolenko* (Leningrad).

3678. Lössagk, H. *Lichtmöglichkeit und Schrecksekunde bei einem Verkehrsunfall.* (Visibility and fright reaction in an accident.) *Indus. Psychotechn.*, 1932, 9, 20-27.—An automobile driver ran into a bicycle rider and injured him fatally. Although the cyclist had no tail light, the truck driver was sentenced for careless driving; thereupon Lössagk undertook an investigation in which he attempted to determine under controlled conditions the exact distance from which the driver would have had to see the rider in order to prevent an accident. The accident situation was repeated and reaction times

for stopping the car were collected from the driver. A bicycle rider was put in the road at various distances, and as soon as the driver saw him he had to report and stop his car. The investigation showed that under the given situation and with his particular lights it was impossible for the driver of the car to perceive the bicycle soon enough to stop. The author points out that this experience shows how psychotechnical investigations may have practical importance.—*C. Burri* (Chicago).

3679. Lubrich, W. *Versuche über Feststellung der Geschwindigkeit von Kraftwagen durch Schätzung.* (Experiments on estimating the speed of automobiles.) *Psychotechn. Zsch.*, 1932, 7, 1-9.—The purpose of this study is to show how accurately expert drivers can estimate the speed of a car, first when they are riding in the car, second when watching the car pass them as they stand on the street, and third from a distance of 150 meters. A group of 55 subjects made about 130 judgments each in the three different situations. The actual speed of the auto was varied at random and was registered by a Brunsch tachometer, an instrument which seems to give more accurate measures than the ordinary speedometer. The results indicate that in none of these three situations is the speed judged accurately enough to be valid as a measure. Only about 22% of the judgments are correct. Three general tendencies may be noticed: (1) low speed is more frequently under- than over-estimated, while high speed is more frequently over-estimated. Speeds between these extremes are about evenly divided in trend of estimation. (2) The lower the speed the greater the actual error in estimation. Very high speed is judged comparatively better than low. (3) The sound of the engine influences the accuracy of estimation. A loud motor seems to cause over-estimation.—*C. Burri* (Chicago).

3680. Markstein, R. *Die Augenermüdung im Differenzmass.* (Ocular fatigue in terms of a differential measure.) *Indus. Psychotechn.*, 1932, 9, 65-78.—In order to study the effect of ocular fatigue on work in which vision is an important factor, the author performed the following experiment. Ten subjects were given tests for visual judgment, visual acuity and visual perception by means of a series of five tests which consisted of letter reading, line judging, and discriminating Sneller's hooks and Landolt's rings. After this series of acuity tests the subjects were set to tracing very fine patterns. This working period lasted from two to three hours, after which another series of visual acuity tests were given. The results are expressed in terms of the mean difference between the first and the second series of tests. These show that for all subjects and all conditions the mean score for a series of ten judgments was greater for the unfatigued eye. A period of two to three hours of fatiguing eye work thus has a detrimental effect on visual acuity.—*C. Burri* (Chicago).

3681. Mayo, E. *The problem of working together.* Chicago: Univ. Chicago Press, 1932. Pp. 9.—A

radio discussion of methods of achieving group collaboration in industrial and other social tasks.—*N. L. Munn* (Pittsburgh).

3682. Medrow, W. *Untersuchung der Farbensichtigkeit in der Gruppenprobe bei der Deutschen Reichspost.* (A group test for color sensitivity for use in the German federal postal service.) *Indus. Psychotechn.*, 1932, 9, 94-95.—The author reports a simple and inexpensive group test for color sensitivity which has been introduced in the German postal and telegraph services in place of individual tests. This new test consists of a card of 50 color samples. The testee has to check each color and indicate which one of five standard colors the given sample is.—*C. Burri* (Chicago).

3683. Oberhoff, E. *Leistungskontrolle an Schreibmaschinen.* (Efficiency control at the typewriter.) *Indus. Psychotechn.*, 1932, 9, 56-60.—The author describes how the efficiency of typists may be raised by introducing an automatic counter which registers the amount of work produced; but he also suggests that such a means of increasing the amount of work produced is less satisfactory than is the bonus system.—*C. Burri* (Chicago).

3684. Ottolenghi, C. *La prevenzione degli infortuni stradali in rapporto alle assicurazioni.* (The prevention of accidents on the road in relation to insurance.) *Atti 2 Cong. Soc. Ital. med. soc.*, 1932, "La psicotecnica applicata alla prevenzione degli infortuni stradali." Pp. 15.—Decrease in the price of civil liability insurance for accidents of the road is impossible in the light of actual conditions of the degree of risk. We may seek to establish the setting of the price of insurance on the basis of the physical, mental, and technical capacity of the drivers instead of on the basis of motor power, but statistical research must give the foundation for this application. For the moment it is necessary to work toward the diminution of accidents by medical, pedagogical, and legislative measures which assure the capability of drivers, the education of pedestrians, and the condition of roads and of motors.—*R. Calabresi* (Rome).

3685. Pond, M. *What is new in employment testing.* *Person. J.*, 1932, 11, 10-16.—Three contributions are described which were presented at a round table on "What is New in Employment Tests" held in connection with the Tenth Annual Conference of the Personnel Research Federation. A report is given of recent developments at the Hawthorne Works of the Western Electric Company. The new Minnesota Vocational Test for Clerical Workers is described. A follow-up study of a selective testing program for tool-making apprentices in the Scovill Manufacturing Company reveals that it has improved the quality of the group selected as much as was accomplished in a year of trial.—(*Courtesy Person. J.*)

3686. Prinz, H. *Beitrag zur Frage der wirtschaftlichen Ansaufähigkeit von erwerbsbehinderten männlichen Jugendlichen.* (The economic usefulness

ness of vocationally handicapped youths.) *Psychotechn. Zsch.*, 1932, 7, 9-16.—Because of the unemployment situation it has frequently been argued that physically handicapped and mentally subnormal individuals should not be permitted to take the places of normal people. The author, who opposes this point of view, maintains that before such measures are taken one should at least find out whether these people are able to fill a socially useful place. He shows on the basis of a statistical analysis of 1299 handicapped individuals that, although these people in general do take longer to find a suitable vocation, when once adjusted they distinguish themselves by great effort in their work. The author also shows that there is no kind of work which should be considered as being closed to these people, but that one should try to give them all the necessary opportunity to find a place in the social and economic scheme.—*C. Burri* (Chicago).

3687. Rupp, H. *Eindrücke über Psychotechnik in Russland.* (Impressions on psychotechnology in Russia.) *Psychotechn. Zsch.*, 1932, 7, 24-30.—Psychotechnology plays a greater part in Russia than it does in Germany. The state actually tries to solve its many industrial problems by scientific means and therefore has established many psychotechnical laboratories in which new working methods are worked out and tested. Some of the urgent problems with which Russian psychologists are occupied are: (1) the selecting and distributing of the workers for kinds of work adapted to each one's ability; (2) the training of the worker; and (3) the organizing of industries in such a way that they satisfy Soviet ideals. In this connection new ways of management and social leadership must be established, because the capitalistic system with foremen has been abolished in the communistic scheme. Since the old system of remuneration has been abolished new means of motivation must be found in order to keep the workers interested in their work and to obtain optimum efficiency.—*C. Burri* (Chicago).

3688. Sándor, B. *Schnelle Aufeinanderfolge einfacher und zusammengesetzter Reaktionen.* (Simple and complex reactions which follow each other in rapid succession.) *Indus. Psychotechn.*, 1932, 9, 1-13.—In a previous investigation the author found that if two reactions follow each other in quick succession, the second reaction time is considerably longer than the first. This fact suggested to him that these findings might have considerable significance in connection with auto driving. This study, therefore, is an attempt to investigate the problem of the changes in the speed of reactions in auto driving when the subject is required to perform two or more reactions in quick succession. 16 men and 11 women were tested on an automobile driving test apparatus. The subjects had to make five different reactions: steering toward the right, pushing the right foot lever, using the hand brakes, pushing the left foot lever, and steering toward the left. These reactions had to be made simply or in combination, depending upon the kind of visual signals given. The follow-

ing combinations of reactions were required: (1) simple reactions; (2) five different reactions according to a definite prearranged order which the subject knew; (3) complex reactions in combinations of two; (4) serial reactions when a distracting light or sound was given. The author found definite sex differences, the women giving faster simple reactions than the men, while for the complex reactions and those under the influence of distractions, the men were superior. The average simple reactions for the five different ways varied from 261-277 σ for the men and from 261-272 σ for the women. When combinations of two signals were given and when the subjects had to give one or another of the five different reactions depending upon the combination of the signals, the average reaction time for men was 1835 σ and that for women 2822 σ . In general it may be said that the more complex the reaction situation was, the longer was the reaction time. The author found also that although continuous practice increases the speed of reacting, there still remained the difference between the poor and good subjects.—C. Burri (Chicago).

3689. Tasch, H. Kontrolle eines Reklamenfeldzuges. (Check-up on the effect of an advertising campaign.) *Indus. Psychotechn.*, 1932, 9, 79-86.—The first part of the article contains a report of a nation-wide advertising campaign which had been made to introduce orangeade as a commercial product. The second part of the report contains an analysis of some questionnaire material which had been gathered for the purpose of showing how widely the new product is consumed. Some of the questions which had been answered are: Do you drink alcohol? What do you drink? When and where do you drink? Do you remember an orangeade advertisement? In general, the orangeade ranked in importance among the upper 25% of all drinks.—C. Burri (Chicago).

3690. Tramm, K. A. Angriffe gegen psychologische und psychotechnische Untersuchungsverfahren. (Objections to psychological and psychotechnical investigations.) *Indus. Psychotechn.*, 1932, 9, 92-94.—The author maintains that frequent objections to psychological and psychotechnical studies, made by the public and the press, should be analyzed in order to see just how much they may be justified, to correct deficiencies in methods of research, testing and vocational guidance, and to understand the needs and wants of workers and employers.—C. Burri (Chicago).

3691. Viteles, M. S. *Machines and monotony*. Chicago: Univ. Chicago Press, 1932. Pp. 9.—A radio discussion of the factors behind monotony in work.—N. L. Munn (Pittsburgh).

3692. Walther, L. *Psychologia pracy*. (The psychology of work.) *Kwart. psychol.*, 1932, 3, 145-203.—A discussion and review of some of the problems of the applications of psychology to the technical organization of human work, adaptations of the worker to his task and of the task to the worker, se-

lection of workers, motion studies, fatigue, and the diagnostic value of some of the tests devised at the Institut J. J. Rousseau at Geneva.—T. M. Abel (Sarah Lawrence).

3693. Weidenmüller, W. v. Eine weitergeführte Plakatprüfung. (An extended test of the effectiveness of advertisements.) *Psychotechn. Zsch.*, 1932, 7, 16-18.—Eight different advertising bill-boards on a particular article were constructed for an exhibition on advertising art; and a questionnaire of six questions on the effectiveness of the advertisements was given to every visitor at the exhibition. 565 of these blanks were filled out and returned. The results of the rankings for each of the eight advertisements and for six different qualities (attention value, clearness, originality, affective appeal, recall of details after two days, and average rank) are reported in the article.—C. Burri (Chicago).

[See also abstracts 3423, 3431, 3445, 3456, 3486, 3500, 3629, 3772.]

CHILDHOOD AND ADOLESCENCE

3694. Adelberg, H. Führertum im Kindergarten. (Leadership in the kindergarten.) *Zsch. f. päd. Psychol.*, 1930, 31, 144-157; 200-203.—The author observed kindergarten children at play in a large park where they were allowed complete freedom. One child, who was under five, organized a game called "Indians," in which he included about 12 children. He took into consideration the characteristics of his playmates, assigning the rôles according to their individual aptitudes, making the less active, for example, the Indian watch-dogs and the more active ones the horses. He amended the rules when emergencies arose and gave the impression of granting a favor whenever he had to yield. After he left the park, two other children were successively chosen to be chief, but each was a complete failure. The first child was too dictatorial, while the second lacked leadership ability. Thus an aptitude for directing is clearly illustrated in these young children.—A. B. Hunter (Clark).

3695. Aksonov, S. D., Gartstein, N. G., Gakkel, L. B., Kapustnik, O. P., Korotkova, J. M., Novikova, A. A., Polesina, L. V., & Faddeeva, V. K. [An attempt at a systematic investigation of conditioned reflex activity in the child.] (Reports from the Laboratory of the Physiology of the Higher Nervous Activities at the Herzen Pedagogical Institute at Leningrad.) *Glavnauka*, 1930. Pp. 240.—The following subjects are treated: the external inhibition of conditioned reflexes in children, by Korotkova; the extinction of conditioned reflexes in children from 5 to 12 years of age, by Kapustnik and Faddeeva; the study of retarded conditioned reflexes in children, by Polesina; the fundamental types of higher nervous activity in children of school age, by Novikova; age peculiarities in conditioned inhibition in children, by Gartstein; peculiarities in type and age found in differential inhibition in children, by Kapustnik; the elaboration of conditioned reflexes and differentiation

through series of stimuli of increasing complexity, by Faddeeva; the formation of conditioned reflexes, conditioned inhibitions, and differentiations in hysterical children, by Gakkel; the formation of conditioned reflexes and inhibition in oligophrenic children, by Gartstein; the formation of a chain of conditioned reflexes in children, by Aksekov; on conditioned reflexes through imitation in children, by Novikova.—A. B. Hunter (Clark).

3696. Aryamov, J. A. [The fundamental questions in adolescent pedagogy.] *Trudi II Univ. Moskva*, 5, 114-124.—From the results obtained from a psychophysiological study of 2,000 adolescents living in a workers' environment in the U.S.S.R., the author concludes that the adolescent period is not characterized by a disequilibrium in the psychophysical functions as many writers have contended. He found no predominance of the constitutional asthenic types among the subjects studied, the distribution of constitutional types being similar to that found in the adult population (24% asthenic, 29% athletic, and 17% pyknic). The physical development was satisfactory in general, though the appearance of puberty was found to be delayed somewhat (19% of the 17-year-old boys being non-pubescent). Temperament seemed to be well stabilized in 70% of the cases. This mental condition, according to the author, was conditioned by the influence of the social environment, which he thinks has a much greater influence on the formation of the adolescent's personality than have biological factors. The health of the subjects left much to be desired, due to over-fatigue and bad living conditions.—A. B. Hunter (Clark).

3697. Bowers, H. Visual imagery of high-school pupils. *J. Genet. Psychol.*, 1932, 40, 232-234.—Scores on tests of ability to evoke visual images are found to be independent of age, sex, and scholastic ability.—J. F. Dashiell (North Carolina).

3698. Brauckmann, K. Das gehörleidende Kind: wie kann es hineinwachsen in unsere Sprache und geistige Gemeinschaft? (The deaf child: how can it grow into our speech and common mental life?) Jena: Fischer, 1931. Pp. 160. M. 7.50.—This book is concerned with deafened, congenitally deaf, and hard-of-hearing children, and on a physiological foundation it develops a new procedure for teaching vocal speech and language. The former methods of teaching deaf mutes and of speech correction are entirely discarded. Deaf children and those with defective speech are put in possession of speech not through a conscious intellectual approach, but in the same manner as the normal child, viz., through exercise of the mechanism of the vocal and speech movements when they are ready to function. To the accompaniment of general movements of the body, under the influence of tempo and rhythm, with the use of the pendulum and ball, they grow into our speech. "Swinging and marching, throwing and catching plays improve speech play." The principle of teaching through movement and systematic exercise is contrasted with the reflective grasp of speech.

The guiding viewpoints are a sensory stimulus (optical), a sensory-motor and psychomotor impulse, and automatization. The author's method is applicable not only to his special field, but also to the teaching of foreign languages, and it could serve as the beginning of a physiological pedagogy, corresponding to physiological psychology.—K. Brauckmann (Jena).

3699. Cacchione, A. La velocità dei processi psicofisiologici nei fanciulli anormali-instabili. (The speed of psychophysiological processes among abnormal-unstable children.) *Riv. di psicol.*, 1932, 28, 12-18.—A group of unstable children, very heterogeneous from the neurological but fairly homogeneous from the medical-pedagogical viewpoint, were given a battery of tests for speed of reaction, tapping, association, reading, and talking. They showed no appreciable difference in speed from a normal control group. There was some slight indication of greater speed in task initiation and quicker fatigability in the unstable group.—T. M. Abel (Sarah Lawrence).

3700. Caldwell, F. F. A comparison of blind and seeing children in certain educational abilities. New York: Amer. Foundation for the Blind, 1932. Pp. 28.—A study of the abilities of blind and seeing children as shown by the results obtained on certain parts of the Stanford Achievement Tests, namely Reading Tests I, II, and III. The author devised a new set of directions and new time limits for the use of these tests with the blind; Maxfield's time limits were found to be too severe. With these new time limits the author finds that the blind are about three years below the level of achievement of the seeing. 34 blind individuals and over 150 seeing children were used in this study. The first part of the pamphlet is devoted to a survey of the early education of the blind and the contributions that testing has made to this branch of education since Irwin's work in 1914. A bibliography is appended.—F. J. Gaudet (Dana).

3701. Decroly, O. Le développement du langage parlé chez l'enfant. (The development of spoken language in the child.) Liège: Edition Biblio, 1930. Pp. 110. 15 Belgian francs.—Decroly gives a critical description of work done recently on language development in children, discussing tests which involve immediate verbal memory, comprehension of words, and expression. He describes the work of Descoendres and other writers on language from the point of view of the total vocabulary, giving a table covering data for children from 7 months to 7 years of age; the similar work of Smith and two of her Belgian students; the work on grammatical development; and the work on word tests done by Masselton, Binet, Vermeulen, and Piaget.—A. B. Hunter (Clark).

3702. Dix, W. K. Zur Psychologie der Reifessit: die beiden Krisen der Pubertät. (The psychology of adolescence: the two crises of puberty.) Dresden: Becker, 1931. Pp. 158. M. 4.80.—The author, who has already published a psychology of early child-

hood (*Physical and Mental Development of the Child*, Leipzig, Wunderlich, vol. I-IV, 1911-1923), has been engaged for several decades in the study of adolescence in young people of all classes. He interprets adolescence as one of a series of dissociations which are observed in the development of the child. He recognizes six such dissociations, followed by association phases, which are processes of inner integration of complex structure. The fourth period, puberty, begins with the fourth dissociation phase, and goes over into the fifth, adolescence. These two phases are called the two crises of puberty, and are presented and interpreted through the author's extensive observation and material. Each crisis is recognized by its characteristic behavior, appearing in the first crisis as an ego-feeling which breaks out blindly in the most varied situations in the fields of the intellect, the emotions, and the will. The second crisis is characterized by the same tendencies and in addition by the fact that the pubescent is no longer merely tossed around like a ball by his instincts, but adopts a critical attitude, integrates his ego-feelings, and tries to overcome all opposition by his own powers. This attitude is described from childhood on in the development of intellectual, esthetic, ethical, social, and religious values. A comprehensive description and interpretation is devoted to sexual development, in which the convergence of mental and physical is stressed. The psychopathology of adolescence is sketched in the third chapter, and it is shown that at this period of dissociation the line between normal and abnormal is often overstepped. After a longer or shorter period of oscillation, the adolescent may return to normal, or remain permanently abnormal. "Puberty is the rock on which the individual with a poor inheritance is wrecked."—W. K. Dix (Roehltitz-in-Sachsen).

3703. Düker, H. Willenspsychologische Untersuchungen an Schülern. (Studies of the volitional ability of school children.) *Arch. f. d. ges. Psychol.*, 1932, 83, 429-456.—Earlier investigations by the author have shown that when subjects are allowed to work at a speed of their own choice or at one set by the experimenter, there is a tendency for the output to be lower under the former condition. The normal difference is about 20-25%. The present study was aimed at the significance of fluctuations from this amount. Such fluctuations are taken to be indicative of the volitional ability of the subjects. Extreme fluctuations are attributed to lack of concentration of attention; smaller fluctuations may be due to the subject's inability to reach a decision as to the speed at which they will work.—R. H. Waters (Arkansas).

3704. Ezekiel, L. P. An aggressive child in a nursery school. *J. Educ. Psychol.*, 1932, 23, 291-298.—The case is described and it is concluded "that it is possible to adjust a child with a dominating personality to a school group without suppressing or destroying her ability and desire to dominate."—J. A. McGeoch (Missouri).

3705. Friedjung, J. K. Die Fehlerziehung in der Pathologie des Kindes. (The relation of faulty nur-

ture to the pathology of the child.) Vienna: Springer, 1931. Pp. 100. M. 4.80.—Many disillusionments in his early practice as a child specialist taught the author that the purely somatic pediatrics then in vogue needed a psychological complement. As an eager student of Freud, he had a large fund of experience from which to develop such a viewpoint, and the present book is a concise but comprehensive presentation of the subject. In 15 chapters it treats of the history of development of the new theories of child psychology, especially the normal instinctive life and its pathological changes; the essentials of child nurture; the psychological relationship of the physician to the sick child in examination and treatment; the reasons for mistakes in bringing up children; the character of children who have been poorly brought up; their school and vocational difficulties; the counsel of the physician as to child nurture; the symptomatology and types of neurotic children; acute and chronic psychoneuroses; the influence of faulty nurture on the course of somatic diseases; disturbances of sleep; running away; suicide in children; and the prevention and treatment of neuroses in children. The fundamentals of child nurture adopted by the Vienna Pediatric Society and an extensive bibliography complete the book.—J. K. Friedjung (Vienna).

3706. Friedjung, J. K. Krankhafte Triebabweichungen im Kindesalter. (Pathological deviations of the instincts in childhood.) *Zsch. Kinderhk.*, 1931, 50, 781-784.—Friedjung dissents from the opinion of W. Stern that the psychoanalytic doctrine of the child's instinctive life is for the most part not the result of direct observation, but a "backward projection of the experiences and instinctive attitudes of the adult." He asserts, on the contrary, that in science, aside from the prediction of the hitherto unknown planet Neptune by Leverrier, there has been no greater example of genius than the enunciation of the doctrine of infantile sexuality by Freud in his *Three Contributions to Sexual Theory*, without a knowledge of childhood. As illustrations, he reports three of his own cases of pathological changes in the instinctive life of children: one, previously published, of a 16-months-old child with an underclothing fetishism; an 8-year-old flagellant; and a child of the same age with an anxiety neurosis.—J. Maas (Karlsruhe).

3707. Gesell, A. How science studies the child. *Scient. Mo.*, 1932, 34, 265-267.—The child is rapidly coming to be studied in the same scientific spirit as are stars and atoms, even with instruments of precision. Both normal growth and individual differences are objects of attention.—J. F. Dashiell (North Carolina).

3708. Grube, K. Zur Charakterologie der deutschen Jugendbewegung. (On the characterology of the German youth movement.) Langensalza: Beltz, 1931. Pp. 74.—The work is neither an historical exposition nor an evaluation of the youth movement. It attempts to understand the character of the phe-

nomenon and set forth its structural basis. There are two possible points of view, the first of which has only an introductory and critical function: the youth movement can be thought of as a general character possibility the realization of which may frequently occur, or as a single unrepeatable fact. In the first case one can regard the youth as a biologically conditioned possibility (as an adolescent manifestation, as Eros-denial, as an inversion phenomenon), or as a world-wide cultural possibility. But all such points of view which recognize a certain basic type schema are not in accord with the single historical actuality. The second view takes its departure methodologically from a fundamental experience, from an expressionistic life orientation, and investigates these in relation to the general life orientation, the social organization, the nature and culture problem, the metaphysical outlook, the personal ideal. As regards character the attempt is made to distinguish between the phenomenon of the youth movement and youth care, as exemplified by political, religious and other youth societies. As a result the youth movement is shown to be already completed and closed, and that which today continues under the old name is no longer the youth movement in the true sense.—K. Grube.

3709. Gurevitch, M. O. *Psikhopatologiya detskogo vozrasta*. (Psychopathology of children.) Moscow: Medgiz, 1932. Pp. 230.—The first part contains the following chapters: Child psychopathology as a part of general psychiatry; The etiology of psychic disorders in the child; Symptomatology; Mental hygiene; Psychoprophylaxis; Orthopedagogogy; and Psychotherapy. The second part, The special psychopathology of the child, consists of the following chapters: Classification of mental disorders; Oligophrenia; Mental disorders following acute and chronic infections; Brain syphilis; Epilepsy; Schizophrenia; Manic-depressive psychosis, and Psychoneuroses. The author takes the pathogenic point of view as the basis for classification, and uses Kraepelin's classification with some alterations.—A. Yarmolenko (Leningrad).

3710. Gurevitch, M. O. [The structure of human motor behavior and its age development.] *Pedologia*, 1931, No. 2, 30-43.—The author traces the development of children's movements in connection with corresponding anatomical data. He shows that motor development goes through a series of crises connected with changes in the whole organism at corresponding ages. For the harmonious development of motor functions educational conditions based on study of children's motor behavior are necessary.—A. Yarmolenko (Leningrad).

3711. Hetzer, H., & Wialitsky, S. Experimente über Erwartung und Erinnerung beim Kleinkind. (Experiments on the expectancy attitude and on memory in infants.) *Zsch. f. Psychol.*, 1930, 113, 123-141.—A striking porcelain clock was shown at intervals of 10 seconds to infants from two to six months of age. Reactions were grouped into three stages: pure fixation, visual exploration of the object,

and a definite separation of the object from its environment by means of eye movements. The expectancy period also showed three stages: a fixation of the spot where the object had disappeared, a search for the object, and a watching for its reappearance. For the memory experiments, a rubber ball used which contained a bird that appeared when the ball was squeezed. Later a similar empty ball was given the child, and his reactions were noted. An interval of one minute was sufficient to destroy memory in children of 10 to 11 months of age, while a child of 19 to 20 months could remember for 15 minutes.—A. B. Hunter (Clark).

3712. Hochholzer, H. Pubertätsphasen und Pubertätstypen des männlichen Jugendlichen. (The phases and types of puberty in boys.) *Zsch. f. päd. Psychol.*, 1930, 31, 529-543.—From his study of 300 subjects, the author lists the following six phases of puberty for which he determined the physiological and psychological characteristics: pre-puberty, the beginning of puberty, the culminating point, post-puberty, the beginning of adolescence, and full adolescence. The average ages for the six phases were: 15:1, 15:7, 16:1, 16:9, 17:3, 17:11. Considerable individual differences were found, extreme cases differing as much as 3 years. The same subjects were given anthropometric measurements by the Kretschmer method, and it was found that puberty was apparently prolonged in asthenic and pyknic types and shortened in athletic types. The influence of race was studied, but the cases were too few for any final conclusions to be drawn.—A. B. Hunter (Clark).

3713. Huebsch, L. Dauerbeziehungen im Kindergarten und ihre Struktur. (The structure of permanent relationships between kindergarten children.) *Zsch. f. päd. Psychol.*, 1930, 31, 463-471; 514-526.—The author's observations extended over a year. Various degrees of friendship and comradeship were found, and there was one clear-cut case of amorous friendship between a little boy of six and a little girl six months younger.—A. B. Hunter (Clark).

3714. Illge, W. Das Kind und das Unfassbare. (The child and the incomprehensible.) *Zsch. f. päd. Psychol.*, 1930, 31, 410-417.—The author asked his students to name certain things which seemed incomprehensible to them. He then submitted certain questions from this list to his 12- and 13-year-old pupils. Their explanations covered a wide range of values, from explanations depending upon magic (similar to primitive explanations) to explanations which were scientifically correct.—A. B. Hunter (Clark).

3715. Koch, A., & Proskurina, Z. [A study of motor development in children and youths.] *Pedologia*, 1931, No. 3, 98-118.—The authors describe the results of an experimental investigation of motor age development of children and youths by means of some special apparatus. Methodological, pedagogical and pedagogical conclusions are drawn.—A. Yarmolenko (Leningrad).

3716. Lebedinsky, M. S. [The development of children's motor behavior.] *Pedologia*, 1931, No. 2, 44-67.—The author aims to investigate experimentally the peculiarities of the spontaneous movements of children. On the basis of investigation of 150 subjects, he concludes that the higher motor reactions develop parallel with the development of the whole personality. This study also reveals considerable possibility of influencing the growth and strength of cortical regulation of motor reactions, and their great plasticity. Interrelations are shown between motor reactions and intellectual activity and language.—A. Yarmolenko (Leningrad).

3717. Lenz, A. K. [The fundamental traits of behavior of the child during its first year.] *Pedologia*, 1930, 4, 437-451.—The author studied the child solely from the motor viewpoint. He analyzed the genesis of the conditioned reflexes, seeking to trace the evolution of conduct from the congenital, unconditioned reflexes, all of which have a sub-cortical origin. He believes that the most complex forms of behavior can be considered as reflex actions due to stimuli which are reacting on or have reacted on the nervous system. A special place in the evolution of conduct is given to the reflexes of sucking and grasping, which, in combination, give rise to many complex reactions.—A. B. Hunter (Clark).

3718. Leontiev, A. N. Studies in the cultural development of the child: III. The development of voluntary attention in the child. *J. Genet. Psychol.*, 1932, 40, 52-83.—A mechanistic interpretation of voluntary attention is approached from the social-genetic angle. Man develops first a mastery over tools (the beginning of culture); he then develops regulation of the behavior of his fellows by supplying additional stimuli serving to reinforce and maintain a given line of behavior; later he comes to supply these additional remaining stimuli to himself; and as external are replaced by internal stimuli, his attention becomes voluntary. Experimentation to make this development observable took the form of a game conducted with subjects of different ages. In the game the subject answered various questions after having been previously instructed not to name certain colors, not to repeat any, etc.; in the course of this he had before him a supply of colored cards, including the forbidden colors. Pre-school children proved very distractible and could not use the cards as external auxiliary stimuli to help them follow the rules of the game; school children used the cards as definite external aids; adults followed the rules with less use of external aids.—J. F. Dashiell (North Carolina).

3719. Lohbauer, H. Der Weg zum Ich in der frühen Kindheit. (The development of the idea of self in early infancy.) *Zsch. f. päd. Psychol.*, 1930, 31, 176-191; 234-247.—The author borrows from the material published by certain parents (Stern, Scupin, and others) for his observations on the formation of the consciousness of self in the child. He shows how the different aspects of the feeling of personality are formed little by little through the contribution of the

organic sensations, the opposition of the child's will to that of the environment, the feeling of propriety, and the distinctions made between the child's mental and sensory functions and the outer, physical world.—A. B. Hunter (Clark).

3720. Lombroso, G. Osservazioni sul mondo esterno e sull'io. *Diario giovanile* (1854-1857). (Observations on the external world and the self. A youthful diary (1854-1857).) *Quad. dell'arch. antrop. crim. e med. leg.*, 1932, No. 9.—R. Calabresi (Rome).

3721. Midulla, C. L'indirizzo ontogenetico-constituzionalistico e l'educazione fisica giovanile. (The ontogenetic-constitutional school and the physical education of the youth.) *Accad. fasc. educ. fis.*, 1930.—In order to educate it is necessary to know the laws of physical and mental development: this understanding is given to us in the most complete and modern form by the ontogenetic-constitutional school, which traces its origin from the old Hippocratic medicine, but which has recently had some great proponents in all countries and particularly in Italy—De Giovanni and Viola on the morphological and anthropometric side and Pende on the biochemical and neuropsychic side. The author describes the laws of growth and of the development of the individual in his psychophysical complexity, and declares that physical education cannot be accomplished if the psychic personality of the young men is ignored.—R. Calabresi (Rome).

3722. Mirk, M. The difference of emotional stability in girls of different ages. *Australasian J. Psychol.*, 1930, 8, 229-232.—The author studied the relationship between the variations at successive ages (12 to 18) of the following three conditions: the psychogalvanic reflexes, the reaction times as shown by word associations, and the responses given to a questionnaire which had been compiled with the object of disclosing the nervous equilibrium of the subjects. In direct proportion to the age of the subjects, an increase in the intensity of the psychogalvanic reflex was found, corresponding to an increase in the percentage of responses judged as unfavorable to a healthy nervous equilibrium. The coefficient was $r = .67$. At the same time, a diminution in the reaction time was noted, the correlation between the reflexes and the reaction time being $-.42$. The correlation between the responses denoting great emotivity and the reaction time was $-.48$. This would indicate an increase in emotivity in relation to an increase in age, the effect, however, being concealed in the reaction time because of the superiority in the intellectual level of the older girls, which would enable them to give association responses more readily than could the younger girls.—A. B. Hunter (Clark).

3723. Olson, W. C. Birthplace and occupation of father as factors in nervous habits in children. *J. Genet. Psychol.*, 1932, 40, 214-219.—635 children were observed for certain oral habits; and analysis places a miscellaneous group highest in manifestation, followed in order by groups with fathers born in the United States, Sweden, Norway, and Germany.

Analysis according to occupations does not yield significant differences.—J. F. Dashiell (North Carolina).

3724. Ormian, H. *Orzdolnoici wnioskowania dzieci*. (On the faculty of deduction in children.) *Polskie Arch. Psychol.*, 1930, 3, 91-105.—Following up the work of Bühler and Lindworsky, the author supplemented the previous methods by the use of certain modifications: (1) modifications in the problems to be solved (the use of syllogisms of the first three figures and of hypothetical syllogisms, the formation of conclusions to be drawn from the conditions of things, the use of riddles, the completion of premises, and the implications of subsequent subject matter from given titles); and (2) modifications in the method of interpretation of responses (the use of introspection data, the analysis of false responses, the study of the child's mental attitude, etc.). Previous tests were limited to syllogisms. Children from 6 to 11½ years of age from the Vienna communal schools were tested, 3,717 group responses and 414 individual ones being obtained. The author gives detailed quantitative and qualitative analyses of his work. The quantitative analysis showed, among other things, that up to the age of 8 there were no sex differences, while between 9 and 11 the boys out-ranked the girls by 6%. The percentage of success increased slowly up to the age of 9, when there appeared a sudden spurt of improvement. Thereafter, the increase in improvement was regular in form, though more rapid than during the earlier years. The experimenter had to furnish children under 9 years of age the elements of the conclusion to be drawn, the reasoning of the child consisting only in finding the correct link. At the age of 11, however, the child himself could find the rule applicable to the particular case. Little children, on the other hand, could not even apply rules with which they were quite familiar. The conclusions obtained from an analysis of certain characteristic moments of reasoning and of certain false responses emphasized the following points: a consciousness of having solved the problem was closely linked with the child's feeling of certitude; the premises had to be subjectively true for the child; and visual imagery played only an accessory rôle in his process of reasoning and did not appear until between the ages of 9 and 11.—A. B. Hunter (Clark).

3725. Peiper, A. *Sinnesreaktionen des Neugeborenen*. (Sensory reactions in the new-born child.) *Zsch. f. Psychol.*, 1930, 114, 363-370.—Basing his conclusions on his medical experience, Peiper criticizes certain current ideas on infant psychology, such as the deafness of the new-born child, his blindness to color, and his insensitivity to pain. He points out that the child is born with a rich system of defense reflexes and should not be denied the possession of cerebral activity and consciousness.—A. B. Hunter (Clark).

3726. Peterson, B. C., & Thurstone, L. L. The effect of a motion picture film on children's attitudes toward Germans. *J. Educ. Psychol.*, 1932, 23, 241-246.—Three attitude schedules were filled in by 133

high-school students 12 days before and on the day after they were shown the film *Four Sons*. The schedules were " (1) a statement scale for measuring attitude toward the German people, (2) a paired comparison schedule of nationality preferences, and (3) a statement scale for measuring attitude toward war." A comparison of the scale values for a number of nationalities "shows quite clearly that the film made the children more friendly toward the Germans." The shifts in the scale values of the other nationalities were inconsiderable.—J. A. McGeech (Missouri).

3727. Ponce, A. *Problemas de psicología infantil*. (The problems of child psychology.) Buenos Aires: Instituto Joaquín V. González, 1931. Pp. 228.—The volume contains 10 lectures, intended for teachers, given by the author at the Free College for Higher Studies of the Argentine Republic. The subjects treated cover different stages of development, Preyer's impulsive movements, perception and hand activity, neologisms and language, imitation, the spirit of contradiction, delight in ornamentation, storytelling, reverie, and reflection.—A. B. Hunter (Clark).

3728. Ripin, R., & Hetzer, H. *Früheste Lernen des Säuglings in der Ernährungssituation*. (The earliest learning of the nursing in the feeding situation.) *Zsch. f. Psychol.*, 1930, 118, 83-127.—The authors observed a large number of infants from birth. Sucking was found to be an innate reaction, present from the beginning. At first it was given in response to various stimuli, and it only gradually became limited to the feeding situation. From the motor point of view, sucking was associated with a suppression of useless general reactions and was joined with certain preparatory movements. The odor of milk, the position of the body, and contact were accessory circumstances, while the preliminary preparations made for a bottle-fed baby soon became signals for the sucking reaction. A reaction in response to the sight of the bottle came later (at the age of three months), and then vision was substituted in the main for the earlier stimuli, such as the placing of the bib around the baby's neck. However, at first the feeding bottle was recognized only under feeding conditions, though it was later recognized under any condition.—A. B. Hunter (Clark).

3729. Ritter, H. *Die seelische Entwicklung regelwidrig veranlagter und fehlerzogener Kinder*. (The mental development of children who are rebellious constitutionally or as a result of defective education.) *Zsch. f. Kinderforsch.*, 1930, 37, 418-490.—The author demonstrates, by means of numerous cases, the correctness of Bühler's theory of the development of the child and the adolescent. These cases were examined clinically and psychologically according to the Homburger method. Ritter finds that the conduct disturbances of various difficult children at different ages are the expression of regressive tendencies toward primitive reactions. This proposition, this puerilism, makes the child unable to adapt himself to the school regime. Certain conflicts accompanied by ambivalence and certain tendencies in the difficult child are explained by a lack

of social maturity and a persistence of lower stages of development in the evolution of character.—A. B. Hunter (Clark).

3730. Ritter, E. Die teilinhaltliche Beachtung von Form und Farbe bei Jugendlichen in ihrer Beziehung zur strukturpsychologischen Typenlehre. (A partial consideration of color and form in adolescents in relation to the theory of types of mental structure.) *Zsch. f. Psychol.*, 1930, 117, 307-338.—It has been established that, in general, very young children are more sensitive to color resemblances and older persons to form resemblances. However, the author found exceptions to this general rule. Seeking to find correlations between these individual tendencies and other traits of character, the author tested a group of adolescents. The tests consisted in sorting certain objects (lotto counters, models, etc.) according to color or form, both methods being possible. The children divided themselves into two definite groups, each using one of the methods and ignoring the other. Those who were sensitive to color belonged to the Jaensch integrated type, which is characterized by a sharpness of certain mental functions (perception, memory, imagination, and feeling) and by a confusion of the external and internal worlds. Those who were sensitive to form belonged to the disintegrated type, which is better adapted to the external world and to practical life. There was no correlation between these types and intelligence level or physical qualities.—A. B. Hunter (Clark).

3731. Rossi, V. Ricerche antropometriche sul lattante normale a Pavia. (Anthropometric investigations on normal infants in Pavia.) *Lattante*, 1931, 2.—The author determines the most important anthropometric values in the infant, from birth up to the age of one year, with the purpose of characterizing the average type in the province of Pavia.—B. Calabresi (Rome).

3732. Röttger, F. Phonetische Gestaltbildung bei jungen Kindern. (Phonetic Gestalt formation in young children.) *Arbeiten z. Entwicklungspsychol.*, 1931, 10. Pp. 218.—The meaningful sound formations spoken by young children between 1;5 and 4;11 are here understood as Gestalts, that is, they are essentially not incomplete copies of the speech structure of grown-ups with whom the children are in speaking association, but are new formations with their own fundamentally characteristic structure and laws. The observations were made of 28 young children of different developmental status by the direct listening method. The phonetic forms are in the main taken from the free speech of the children and immediately recorded in writing. Basic results are the following: (1) All the phenomena which the student of speech finds in sound variations in human speech are observable here. (2) The appearance of these phenomena in a particular child is individual and very varied; also, in the speech development of an individual the groups of phenomena change. (3) The invariability of the phenomena and the individual development of the speech form point to an inner tendency depending on that intrinsic part of the

whole being which we call structure. (4) All forms appear to the interpreting glance as if spread out between two dynamic poles: the tendency towards unity, and the tendency toward separation into parts. The latter grows stronger with increasing development. Herein the writer stands in conscious opposition to the increasingly widespread point of view, the marks of which are isolation of the observed elements and recognition of fundamental facts of developmental psychology. He is in especial disagreement with W. Stern and W. Wundt; the experimental results given here point essentially in the same direction as those found by G. Ibsen in his investigation on the form and sense of senseless words.—F. Röttger.

3733. Thompson, H. The growth and significance of daily variations in infant behavior. *J. Genet. Psychol.*, 1932, 40, 16-36.—That behavior growth proceeds as rapidly as physical growth is indicated by daily 10-minute controlled observations (sub-handling activities are tabulated and analyzed in detail) made on a 46-week-old infant for a period of six weeks. The manifestations include (1) greater frequency in one item of behavior, (2) improved performance, (3) a new item of behavior, and (4) integration of previous activities. It is relatively easy to devise a behavior growth scale by testing children of different ages; but certain special considerations are recommended.—J. F. Dashiell (North Carolina).

3734. Toth, T. Reine Jugendreife. (Pure adolescence.) (5th ed.) Freiburg: Herder, 1931. Pp. 140. M. 3.20.—A book of careful sexual explanation in the religious Catholic spirit.—W. Wirth (Leipzig).

3735. Williams, H. D. Conflicting authorities in the life of the child. *Rel. Educ.*, 1932, 27, 413-417.—One of the most frequent causes of delinquency among children is the conflict of authority to which they are subject. This conflict may arise between the parents, between parents on the one hand and school, law, or social groups on the other, or between gangs or other conflicting groups. The result is a failure to develop a well rounded, consistent and properly adjusted personality.—J. P. Hylan (Stoneham, Mass.).

3736. Winkler, H. Richtlinien zur Beobachtung und Beurteilung der Drei- bis Sechsjährigen im Kindergarten. (Principles for the observation and judgment of three- to six-year-olds in the kindergarten.) (2nd ed.) Munich: Reinhardt, 1931. Pp. 15. M. .80.—To guide a child wisely, one must understand its nature. Even young children know how to make themselves attractive or unattractive. For example, a rough child will act toward the teacher in an affectionate and flattering manner, while a weak one, in order to appear strong, makes himself appear coarse and wild. The author speaks of the apparent nature of the child and distinguishes it from his essential character, lying beneath this deceptive layer. In order to penetrate into this essential nature, a comprehensive observation of the individual child is

necessary over a long period. During the play age such observations can be made in greater abundance than at later periods, when the child has learned to control himself and to dissimulate. This book gives directions for observation under the headings: bodily development; home and environment; relationships to teacher and companions; activities; intelligence, emotional life, and will; moral development; and undesirable behavior. The results of repeated observations are entered in the notebook which the teacher is supposed to keep for each child, and thus each succeeding teacher has the benefit of this study and can treat the child in accordance with his characteristics, and avoid mistakes. Often a child's behavior at later ages can be understood only in the light of the observations made in the kindergarten. These early studies are often of great value in vocational guidance, the care of adolescents, and the work of the juvenile court. As the author had previously published a similar book, *The Essential Character of School Children* (Munich: Reinhardt, 1931), the use of both texts would unify the study of pupils from kindergarten to the end of school life.—*H. Winkler* (Munich).

3737. Yarmolenko, A. V. [Motor ability in the pre-school child.] *Pedologia*, 1930, 4, 463-467.—A series of motor tests (running, leaping, etc.) were given to 60 children from 5 to 7½ years of age, the two sexes being equally represented. No definite sex differences were found. The evolution of motor activity, however, was found to be very rapid, the coefficients which represented the performances of the various tests undergoing an increase of 20% to 300% during the two-year period tested. Accordingly, the pre-school period seems to be preeminently the age of motor development. The results coincide in general with those obtained by Homburger.—*A. B. Hunter* (Clark).

3738. Zalkind, A. B. [The fundamental characteristics of the age of puberty.] *Pedologia*, 1930, 1, 3-25.—The author protests against the general opinion which holds that the age of puberty is a negative, critical period in the individual's development in which are emphasized pathological tendencies and neuropsychological instability. He traces the development of adolescents, finding three main divisions between the ages of 10-11 and 16-18. The first period is characterized by a consolidation of neuropsychic and infantile acquisitions accompanied by an unfolding of certain preparatory processes linked with a mass of elements which are to be of value later on in the individual's life. This period does not present any special pedagogical problems. The contrary is true of the next stage, which is composed of three main processes: a stabilization and consolidation of the effects of previous development; changes in the nervous system caused by a weakening of the processes of inhibition and perceptive functions, a weakening which is due, not to any defective functioning of the sense organs, but to a state of general excitability; and the preliminary manifestations of specific characteristics of the adult stage.

The third and last period of the adolescent stage is also heterogeneous, involving numerous processes of a biological and nervous origin. Well defined adult attitudes are manifested, demanding a changed educational treatment. The author also gives certain observations covering the evolution of memory and thinking. The evolution proceeds as follows: a development of logical and mechanical memory; a period of decline in mechanical memory with an increase in memory involving the child's interests, particularly where imagination and striking incidents are concerned; and a final stage of systematic thinking and synthetic work which resembles the adult stage of thought.—*A. B. Hunter* (Clark).

3739. Zawirska, J. Wyjaśnienie zjawisk przyrodniczych przez dzieci. (The explanation of natural phenomena by children.) *Polskie Arch. Psychol.*, 1930, 3, 110-127.—The author used the first three of the five questions compiled by Muchow of Hamburg: If a piece of paper is torn into halves, why does the half which has been crumpled fall faster than the other? Why does water in a glass rise when a pebble is placed in the glass? When a glass entirely full of water is covered with a piece of paper and then is turned upside down, why is not the water spilled? The subjects were from 9 to 11 years of age, coming from the secondary and communal schools of Warsaw and from the surrounding country. 218 children (138 boys and 80 girls) took the group tests and 24 children (10 boys and 14 girls) the individual ones. Four types of responses were found: explanations by the succession in time of the particular events; animistic and dynamic explanations based on primitive beliefs; mechanical explanations depending on series of reciprocal actions; and explanations based on modern, scientific conceptions. The fourth class of explanation seemed to be linked with the environment, depending on the degree of civilization (town life versus country life) and the degree of well-being in the child's immediate social environment. In harmony with other experimenters, the author was struck by the prevalence of explanations based on the idea of gravity.—*A. B. Hunter* (Clark).

[See also abstracts 3566, 3608, 3617, 3773.]

EDUCATIONAL PSYCHOLOGY

3740. [Anon.] Character education. Dept. of Superintendence, Tenth Yearbook. Washington, D. C.: National Education Association, 1932. Pp. 535.—The yearbook is the product of a special Commission on Character Education appointed by the National Education Association. Most of the chapters of the book are concerned with practical problems of the organization of activities and curricula with a view to greater emphasis on character and citizenship development in the schools. There are two long chapters, however, which deal more directly with research and theory. The first is entitled *Research Related to Character Education*, and contains abstracts of 95 studies. The second is a chapter on tests and measurements, and consists of a discussion and a collection of valuable information about the

main tests, questionnaires, and rating scales available in the field.—V. Jones (Clark).

3741. Beaumont, H. Student employment at a state university. *Person. J.*, 1932, 11, 17-19.—Of 2430 men and women students who answered a questionnaire, 55% worked during the summer vacation and 35% had outside employment during the school term, working an average of 22.7 hours per week. A majority spent less than \$400 per semester, but members of fraternities spent approximately \$100 more per semester than non-members.—(Courtesy *Person. J.*).

3742. Bowman, H. L. The relation of reported preference to performance in problem solving. *J. Educ. Psychol.*, 1932, 23, 266-276.—The reported preferences of 564 pupils in grades VII, VIII, and IX for given arithmetic problems correlate .56 with performance. Conclusions are drawn regarding the types of problems preferred and the educational implications of the results.—J. A. McGeoch (Missouri).

3743. Bulaton, N., & Rosanov, T. [Measuring children's technical knowledge.] *Pedologia*, 1931, No. 1, 37-45.—The polytechnical organization of the school and the preparation of technically competent workers requires a thorough investigation and measurement of children's technical abilities and scope of knowledge. The authors propose a series of tests for measuring technical knowledge.—A. Yarmolenko (Leningrad).

3744. Busemann, A. Interesse an geistigen Gegenständen als Unterrichtswirkung höherer Schulen. (Intellectual interests as a result of instruction in higher schools.) *Arch. f. d. ges. Psychol.*, 1932, 83, 325-356.—114 graduates (86 men, 24 women) were asked whether their training had stimulated their interest in intellectual matters; in what subjects they were most interested; and how it happened that they were thus interested. Interests in German and modern languages and in philosophy were most frequently stimulated; interests in history, mathematics, biology, art, physical science, ancient languages, and music were next, with interest in religion last. The subjects of the experiment could be divided into two groups on the basis of their interests—natural and social science groups. Causes for their interests range from wholly extra-curricular to school training. Factors of special ability and early training are fundamental in causing interest in any subject.—R. H. Waters (Arkansas).

3745. Byrns, R. K. Scholastic aptitude and freshman achievement. *School & Soc.*, 1932, 35, 713-718.—All seniors in the high schools of the state of Wisconsin were given the Ohio State University psychological test in 1929. Those seniors who entered the University of Wisconsin were a somewhat selected group, as measured by performance on the mental test and by rank in high-school class. In a study of the 1825 who enrolled as freshmen at the state university the following coefficients of correlation were obtained: mental-test percentile rank (16,619 seniors as basis for norms) and first se-

mester grade-point percentile rank, $r = .36$; mental-test percentile rank (1774 Wisconsin freshmen as basis for norms) and first semester grade-point percentile rank, $r = .48$; first and second semester grade-point average, $r = .73$; mental-test percentile rank and percentile rank in high-school class, $r = .51$; mental-test score and first-year grade-point average, $r = .43$; actual grade-point average and that predicted from a formula derived on the basis of high-school rank, mental-test score, and high-school grade-point average, $r = .63$. The use of the formula is believed to make possible rather satisfactory prediction of scholarship, as two-thirds of those cases whose actual grade-point average indicated failure had been successfully located by the procedure.—H. L. Koch (Chicago).

3746. Caldwell, O. W., & Lundeen, G. E. What can be done regarding unfounded beliefs? *School & Soc.*, 1932, 35, 680-686.—The authors prepared some teaching units in general science for junior high school students designed for the purpose, among others, of correcting 12 commonly prevailing unfounded beliefs. Tests given before and after instruction to between 800 and 900 students in 10 different high schools revealed that the gain in desirable responses in regard to the 12 misconceptions was 33.3%. More than 55% of the children in the final test answered correctly all of the examination questions concerning the unfounded beliefs.—H. L. Koch (Chicago).

3747. Charters, J. A. The opportunity of the church for sex education. *Rel. Educ.*, 1932, 27, 428-434.—The Christian church is largely responsible for the degraded conception of sex. This came about from the carnal practices of the older religions, which were largely built around the sex instinct. The early Christians felt obliged to guard against these. As a means of exalting spiritual control this instinct was debased. But there is no good reason why the church should look askance at a normal and necessary function. Indeed, it is its duty to educate people to a wholesome respect for sex relationships. This should be begun in an appropriate way with very young children through parental instruction, and continued by the pastor or other qualified person. A parents' group for discussion, with the guidance of a few good books, may become a practical means of self-education.—J. P. Hylan (Stoneham, Mass.).

3748. Cowley, W. H. Who produces student personnel literature? *School & Soc.*, 1932, 35, 638-640.—The author, in preparing a bibliography of 4902 titles on student personnel problems, took the occasion to note the individuals and institutions contributing most to that general question. One-fourth of what has been written on the problem has been contributed by 68 individuals. The academic centers most vigorous in their interest in the question are Columbia University, the University of Minnesota, Ohio State University, the State University of Iowa, and the University of Chicago.—H. L. Koch (Chicago).

3749. Crawford, A. B., & Clement, S. H. *The choice of an occupation*. New Haven: 1932. Pp. vi + 488.—Published by the Department of Personnel Study in the interest of students at Yale University, this book discusses the factors (aptitudes and interests) which make for vocational success; then presents aids to analysis of: (1) self, based upon questions from *The Young Man in Business*, by Davis; (2) interests, in terms of ideas, people, things, and monetary symbols, from John Mills (1924); (3) types of occupational activities, i.e., whether dealing primarily with ideas, people, things or monetary symbols, discussing and listing various occupations under each. One chapter discusses earnings in different occupations, containing tables of earnings of college graduates in several professions and businesses. The major part of the volume is devoted to discussions of 74 specific occupations. These chapters are written from the point of view of aptitudes and interests utilized and satisfactions derived; some are by leaders in their respective occupations and others were prepared by the department.—A. G. Reynolds (Winchester, Mass.).

3750. Eaton, T. H. *College teaching*. New York: Wiley, 1932. Pp. 264. \$2.50.—(Not seen).

3751. Fancier, D. G., & Crawford, C. C. *Teaching the social studies*. Los Angeles: Crawford, 1932. Pp. 376. \$2.00.—(Not seen).

3752. Femiak, A. [The study of the five-day school week.] *Pedologia*, 1931, No. 1, 31-36.—The author investigates the influence of the five-day week upon school children and their attitude towards this system, and concludes that it has had an improving influence upon the physical status and working ability of the pupils.—A. Yarmolenko (Leningrad).

3753. Glenn, E. B., & Grunberg, B. C. *Instructional tests in general science*. Yonkers, N. Y.: World Book, 1932. Pp. 96. \$36.—(Not seen).

3754. Grover, C. C. Results of an experiment in predicting success in first year algebra in two Oakland junior high schools. *J. Educ. Psychol.*, 1932, 23, 309-314.—Scores on the Orleans Algebra Prognostic Test predict achievement with considerable success and may be of appreciable advantage in school administration, especially when combined with intelligence scores.—J. A. McGeoch (Missouri).

3755. Haggerty, M. E. The crux of the teaching prognosis problem. *School & Soc.*, 1932, 35, 545-549.—The thesis is defended that attempts to prognosticate teaching success by any one procedure have failed, in the main, because teaching success is conditioned by the teacher-pupil relationships in intellect, in personality traits, etc., as well as by the subject taught. A teacher ineffective with a group of dullards may accomplish much with a group of talented pupils. A good high-school teacher may fail when called upon to instruct children in the kindergarten.—H. L. Koch (Chicago).

3756. Isaell, N. Course-crabbing: a study of an educational taboo. *School & Soc.*, 1931, 34, 877-880.—The study is concerned with the tabu against

playing up to the instructor in order to improve one's academic rank or standing. The responses of 140 students, of sophomore rank or above, to a brief questionnaire concerning their attitude regarding the practice described furnished the data of the investigation. Apparently anything that might be interpreted as putting one's best foot forward or as flattering the instructor students tend to despise. They tend, moreover, to lean backward, lest their spontaneous responses be misinterpreted by their classmates. As remedies for the evil itself as well as for the fear of false accusation the following have been suggested: less formal class-room procedure, more objective examinations, more frequent student-instructor conferences, and abandonment of grading except in terms of pass or fail.—H. L. Koch (Chicago).

3757. Jones, V., & Crook, M. Educational tests. *Psychol. Bull.*, 1932, 29, 120-146.—A summary covering 168 titles. Two general tendencies noted are the inclusion of more testing in textbooks and the development of tests of attitudes. The development and use of tests has continued along many lines: for survey and experimental purposes, for diagnosis and remedial teaching, for prognosis and guidance, for improving marks and marking systems. Critical studies of tests have also appeared.—J. F. Dashiell (North Carolina).

3758. Marshall, E. M. Evaluation of types of student-teaching. *Teach. Coll. Contrib. Educ.*, 1932, No. 488. Pp. 98.—R. R. Willoughby (Clark).

3759. McCabe, M. E. [Ed.] Record of current educational publications, July 1-September 30, 1931. Washington, D. C.: Gov't Printing Office, 1932. Pp. 91.—R. R. Willoughby (Clark).

3760. Odell, C. W. A test in educational measurements. *School & Soc.*, 1932, 35, 810-814.—The author has devised an objective test to cover the content of an introductory course in educational measurements. The test was finally standardized on the basis of the performance of 600 students, contains 4 divisions, and has 2 forms. The average coefficient of correlation between the two forms was .72. It is recommended, however, that whenever possible both forms be given.—H. L. Koch (Chicago).

3761. Olshansky, B. [Polytechnical work interests of elementary school pupils.] *Pedologia*, 1931, No. 1, 46-56.—An investigation by means of questionnaires and objective observations of 500 children during their manual work in the industrial shops throws light on their attitude toward work, its duration, home-work, and collectivism. Conclusions as to the particular interests in work of children from different social environments are drawn.—A. Yarmolenko (Leningrad).

3762. Polak, U. B. [A plea for rationalization of school-work production.] *Pedologia*, 1931, No. 1, 24-30.—The Soviet has the task of rationalizing its work process in order to improve the rate and quality of work. The author has collected 1412 proposals of school children dealing with problems of rationaliza-

tion of school work, particularly work discipline, the contents and methods of teaching, self-government, etc.—A. Yarmolenko (Leningrad).

3763. Pressey, S. L., Pressey, L. C., & Barnes, E. J. The final ordeal. *J. Higher Educ.*, 1932, 3, 261-264.—Two minor follow-up investigations on the value of the oral examination and the comprehensive examination for the doctorate are reported, with the admission that the data are almost negligible but show interesting results indicating extreme unreliability for both types of examinations. "Results definitely indicate the need for careful consideration of these two almost universal means of appraising graduate work, work for honors, and other similar educational programs."—R. A. Brotemarkle (Pennsylvania).

3764. Price, W. T. R. Study of character education made by the faculty of Scarborough School. *Rel. Educ.*, 1932, 27, 424-427.—The article presents what are considered the character training possibilities of physical education, shop work, English, natural sciences, social sciences, mathematics, Latin, French, music and art.—J. P. Hylan (Stoneham, Mass.).

3765. Reeder, C. W. Prediction by mid-quarter marks. *J. Higher Educ.*, 1932, 3, 253-256.—A four-year study of mid-quarter (first six weeks) grades, totaling 11,344 class marks given on a five-letter basis, when compared with final grades for quarter shows two out of three grades are the same in E (failure) grades, two out of five the same in D (poor), and one out of two the same in A, B, and C. The author discredits to some degree the arguments usually advanced concerning the motivation of students by means of grades, both high and low. The advisory conference with students is greatly enhanced by such reports. Several variations of advisory programs gave valuable results. Predictability of final grade is estimated as accurate in nine out of ten cases. Correlations of mid-quarter grades and final quarter grades are considered very indicative.—R. A. Brotemarkle (Pennsylvania).

3766. Seibert, L. C. A series of experiments on the learning of French vocabulary. *Johns Hopkins Univ. Stud. Educ.*, 1932, No. 18. Pp. 106.—Various assertions are constantly made as to the best method of studying foreign vocabulary so as to economize time and facilitate recall. To test the truth of these assertions, the author conducted a series of experiments, the foreign vocabulary being limited to French. Technical, obsolete and rare words in English were avoided, and great care was used to make certain that the words were unknown to the group. The effects of practice, difference in groups, and difference of material were obviated by a careful rotation of groups and tests. The results show that studying silently or aloud with a written recall is more efficient than studying aloud; studying foreign vocabularies in sentences is a far less efficient method than studying associated pairs (native word, foreign word); the part method is inferior to the whole method in the study of a list of associated pairs; dis-

tributed relearning over a period of 10 days is more effective than the same amount of relearning concentrated in one sitting at the end of 10 days; the reading method is inferior to the recitation method; there is a negative correlation between the time of learning and the amount retained; there is a positive and fairly high correlation both between the amount retained in different methods of learning and between the amounts retained in the immediate and delayed recall; the curve of forgetting has a negative acceleration. The author's experiments demonstrate the great importance of the element of chance and the unreliability of a single experiment. Too many previous experiments in this field have lacked sufficient control and have employed faulty technique.—L. L. Atwood (Worcester Polytechnic Institute).

3767. Selle, E. S. The organization and activities of the National Education Association; a case study in educational sociology. *Teach. Coll. Contrib. Educ.*, 1932, No. 513. Pp. 187.—R. R. Willoughby (Clark).

3768. Shipley, G. T. An evaluation of guided study and small group discussion in a normal school. *Teach. Coll. Contrib. Educ.*, 1932, No. 486. Pp. 59.—R. R. Willoughby (Clark).

3769. Smith, M. L., & Bathurst, J. E. Tests and measurements in religious education. *Rel. Educ.*, 1932, 27, 439-442.—The goal of scientific method as applied to religion is to test religious effects as accurately as those of foods upon the body are tested. One of the difficulties arises from the lack of a generally accepted definition of religion. The authors propose that "Religion is the sum total of the effects which traits, aptitudes, skills, information, God and man have upon the behavior-conduct of man." Accordingly, they divide religious tests into those for intelligence, information, emotions, social intelligence, and conduct, and enumerate the tests for each. Although the results with intelligence and emotions are more satisfactory than those with the other parts of the problem, none are as yet adequate. However, there is promise of progress. It is believed that if the causes and results of religion can be discovered the church will be able to produce religious life in others.—J. P. Hylan (Stoneham, Mass.).

3770. Terry, P. W. The problem test in elementary educational psychology. *J. Educ. Psychol.*, 1932, 23, 259-265.—It is found experimentally that "the problem test distributed in advance can be employed to motivate the review of a unit of subject matter in educational psychology (1) with the expectation that helpful habits of study will be exercised and (2) that professionally valuable attitudes will be developed by many students (3) with approximately as great a gain in informational learning as is to be expected from the use of tests the nature of which is not known beforehand."—J. A. McGeech (Missouri).

3771. Thyen, H. Ueber Geschlechtsunterschiede der intellektuellen Leistungsfähigkeit. (On the differences between the sexes in intellectual capacity.) *Jenaer Beitr. z. Jugend- u. Erziehungspsychol.*, 1929,

1-76.—The author made statistical calculations from the examination grades received by the students of both sexes in the co-educational, higher, practical schools (*Oberrealschulen*) of Oldenburg over a period of several years. Scholastic records were slightly higher for the girls, especially in German and the foreign languages. The boys excelled in history only, both sexes being equal in mathematics. However, if account is taken of the fact that the girls were a highly selected group in the upper classes, then the superiority of the boys in history and even in mathematics is accentuated. The general superiority of the girls, according to the author, is not due to innate ability, but to a closer application to work and to a determination to excel. Other questions are discussed, such as the influence of puberty, the influence of the sex of the teacher on the students, and the effect of the teacher's sex on his judgment of the pupils' work.—*A. B. Hunter* (Clark).

3772. Vidoni, G., & Tamburri, T. Contributo all'orientamento professionale con note in riferimento alla costituzione individuale. (A contribution to professional orientation, with a note with reference to the individual constitution.) *Riv. di psicol.*, 1932, 28, 19-25.—The results of some psychotechnical tests correlate well with individual ranks at the end of the course at the professional school. The "moral" element has also to be taken into account. Among pituitary cases (within normal limits) is found good attention and technical perspicacity, but the delicacy of movement is deficient. Among the thyroid cases the capacity for attention is less good, while the rapidity of movement stands out.—*T. M. Abel* (Sarah Lawrence).

3773. Vogel, C. L. *Psychology and the Franciscan school*. Milwaukee: Bruce, 1932. Pp. 168. \$3.00.—(Not seen).

[See also abstracts 3552, 3616, 3643, 3700.]

BIOMETRY AND STATISTICS

3774. Dunlap, J. W., & Kurtz, A. K. *Handbook of statistical nomographs, tables, and formulas*. Yonkers: World Book, 1932. Pp. vii + 163. \$6.00.—Re-cited to correct price (See VI: 2564).—*R. R. Willoughby* (Clark).

3775. Horst, P. A short method for solving for a coefficient of multiple correlation. *Ann. Math. Statist.*, 1932, 3, 40-44.—By the use of determinants, a formula is derived which shows that when the original equations are given in terms of correlation coefficients, the multiple correlation coefficient is equal to the square root of the last product summation in the standard forward solution by the Doolittle method. All of the back solution work can be eliminated if the regression coefficients are not needed and only the multiple correlation coefficient is desired.—*A. K. Kurtz* (U. S. Civil Service Commission).

3776. Luyten, W. J. Notes on stellar statistics. V. On the use of the first Laplacean error curve. *Proc. Nat. Acad. Sci.*, 1932, 18, 360-365.—The second Laplacean or normal curve of error (Gaussian curve) was used, and it failed to give an adequate fit to data

consisting of differences between successive measures of distance of double stars. When a first Laplacean error curve of the form $y = k/2 \cdot e^{-1/2|x|}$ or $\log y = A + B|x|$ is used with the same data, the fit is excellent—the goodness of fit computed from Pearson's χ^2 test giving $P = 0.93$.—*A. K. Kurtz* (U. S. Civil Service Commission).

3777. Masters, H. V., & Upshall, C. C. Table of probable errors for certain inter-percentile ranges. *J. Educ. Psychol.*, 1932, 23, 287-290.—The necessary formula is derived, the table is given and its use illustrated.—*J. A. McGeoch* (Missouri).

3778. Stanovich, P. [Against the overvaluation of statistical methods.] *Pedologia*, 1931, No. 3, 67-69.—The writer shows the one-sided and exclusive use of statistical methods in pedology, and especially the weak points of variation statistics in its application to practical pedagogical work.—*A. Yarmolenko* (Leningrad).

3779. Winsor, C. P. The Gompertz curve as a growth curve. *Proc. Nat. Acad. Sci.*, 1932, 18, 1-8.—"The Gompertz curve and the logistic possess similar properties which make them useful for the empirical representation of growth phenomena. It does not appear that either curve has any substantial advantage over the other in the range of phenomena which it will fit. . . . In each curve, the degree of skewness, as measured by the relation of the ordinate at the point of inflection to the distance between the asymptotes, is fixed. It has been found in practice that the logistic gives good fits on material showing an inflection about midway between the asymptotes. No such extended experience with the Gompertz curve is as yet available, but it seems reasonable to expect that it will give good fits on material showing an inflection when about 37 per cent of the total growth has been completed. Generalizations of both curves are possible, but here again there appears to be no reason to expect any marked difference in the additional freedom provided."—*A. K. Kurtz* (U. S. Civil Service Commission).

3780. Woodrow, H. Quotidian variability. *Psychol. Rev.*, 1932, 39, 245-256.—The author points out that measurements of performance obtained at different sittings cannot be considered as belonging to the same universe of response. He suggests a method of measuring the variation from day to day, under supposedly constant conditions, of a series of measurements of responses. This he calls the index or ratio of quotidian variation. The formula is the ratio of the standard deviation of the daily averages ($\sigma_{\Delta v}$) to the average daily standard deviation divided by the square root of the number of cases, or $(\Delta v \sigma_{\Delta v} / \sqrt{N})$. If the variations from day to day were comparable to the variations within any one sitting, then the above ratio should be unity. But it is pointed out that in the case of data reported by several authors the ratio exceeds unity by various amounts, up to as much as seven times.—*A. G. Bills* (Chicago).

[See also abstract 3438.]

MENTAL TESTS

3781. Colucci, C. Valore pratico dei tests mentali. (Practical application of mental tests.) *Riv. di psicol.*, 1932, 27, 225-227.—T. M. Abel (Sarah Lawrence).

3782. Droba, D. D. Methods for measuring attitudes. *Psychol. Bull.*, 1932, 29, 309-323.—125 titles are reviewed in connection with an analysis of methods which presents definition, advantages, and disadvantages for each method. They are: absolute ranking, case method, relative ranking, graphic rating scale, paired comparisons, method of equal-appearing intervals.—J. F. Dashiell (North Carolina).

3783. Furfey, P. H., & Muehlenbein, J. The validity of infant intelligence tests. *J. Genet. Psychol.*, 1932, 40, 219-223.—The Linfert-Hierholzer scale administered in the second six months of life does not predict Stanford-Binet scores four years later; and doubt is thrown on the validity of other tests in the same class with the former. Some differential effects of socio-economic status must, however, be recognized.—J. F. Dashiell (North Carolina).

3784. Gonzalez, A. Nacimiento y evolucion de la inteligencia. (The birth and evolution of intelligence.) Madrid: Aguilar, 1930. Pp. 263. 5 pesetas.—The author, who is a physician and an experienced teacher, wished to place before the Spanish-speaking public a book covering the essential data on the mental evolution of children and the methods which measure this development. He emphasizes the work of Binet and Simon.—A. B. Hunter (Clark).

3785. Gray, J. S. A behavioristic interpretation of intelligence. *Psychol. Rev.*, 1932, 39, 271-278.—Intelligence is described as that type of behavior which is caused or directed by the accurate prediction of future conditions. Purposive behavior is behavior whose cause is the language description of the goal, which comes at the beginning of the series. Problem solving is similar. Hence the objection that predictive behavior is non-mechanical is invalid, for it is a mechanical response to a past condition—the language description of the goal.—A. G. Bills (Chicago).

3786. Harvey, O. L. Concerning the Thurstone Personality Schedule. *J. Soc. Psychol.*, 1932, 3, 240-251.—The detailed results from the administration of the Thurstone scale to 146 male students at the University of Texas are presented and analyzed. The writer suggests that in addition to Thurstone's criterion of "discriminative" value, the frequency of the occurrence of the significant response must also be used in choosing the best items. A second difficulty lies in the fact that certain types of items occur with greater frequency in the total list, so that, because internal consistency is the criterion of validity, these categories are unduly weighted and thus are retained at the expense of other equally valid but less frequently presented types.—E. D. Newman (Frankfurt).

3787. Holzinger, K. J., & Swineford, F. Uniqueness of factor patterns. *J. Educ. Psychol.*, 1932, 23, 247-258.—"It has been shown that Professor Kelley's seventh grade correlations (see *Cross Roads in the Mind of Man*) may be fitted by a number of patterns varying as to number of factors, position of coefficients, and numerical value of these constants. These variations are brought about chiefly by the differences in the preliminary estimates of necessary additional factors." The paper illustrates the "lack of uniqueness in pattern fitting by procedures thus far employed."—J. A. McGeoch (Missouri).

3788. Hroch, K. B. Ueber Tests. (Tests.) *Vychovateľské listy*, 1931, 148-150.—Hroch discusses the American tests for intelligence (100 questions to which the pupils write the answers). He believes that the large number of questions does not entirely exclude the possibility of mere errors. A greater advantage of this method is that it picks out pupils who are unable to express themselves clearly. For European children, the author recommends the completion test, the comparison test, and questions as to causation. In contrast to the American method, which makes no distinction between partly and entirely incorrect answers, the classification of answers should take into account the quality of the expression. The author tries to bring the number of correct replies into relationship with the usual five marks of the school report.—H. Zweg (Brünn).

3789. Jankowska, H. Poziom inteligencji dzieci szkol powszechnych m. Wilna według skali Binet-Simon Terman oraz wartose poszczegolnych testow swietle tych badan'. (The level of intelligence of children of the communal schools of Vilna according to the Terman Binet-Simon scale and the value of certain particular tests in the light of results from the examination.) *Polskie Arch. Psychol.*, 1930, 3, 172-212.—Jankowska tested 1018 children from 4 to 16 years of age, although she includes only the children from 5 to 14 years of age in her calculations. In her results she compares the ratings of her Polish children and the ratings of Americans for these same tests. She also analyzes the results from various tests, bringing out marked differences. She emphasizes the fact that only the communal schools were examined, to which the upper classes do not send their children. However, she found 6 children from very poor families who had IQ's between 120 and 133, while Terman found no American children from the lower stratum of society with IQ's over 120.—A. B. Hunter (Clark).

3790. Lincoln, E. A., & Wadleigh, V. L. Change and constancy in group test I.Q.'s. *School & Soc.*, 1932, 35, 606-608.—About 150 children were given the Otis Primary, the National A, and the Terman A group intelligence tests, when they were in grades 3, 4, and 6, respectively. The percentage of cases showing a change in IQ of 10 points or more was 36.9; whereas a shift of 5 points or less appeared in 31.3% of the comparisons. The median group-test change, it is concluded, is only a point or two greater than the average individual-test change. There are,

however, more large variations in IQ (above 10 points) in the case of the group than in that of individual-test results. In the present study only three-fourths of the large changes in IQ would have had any significant effect upon the child's general classification in school.—*H. L. Koch* (Chicago).

3791. *McFadden, J. H.* The will-o-the-wisp "intelligence." *Psychol. Rev.*, 1932, 39, 225-234.—After examining several current definitions of intelligence and finding them inadequate, especially because they imply that intelligence is an entity, because they fail to cope with problems such as are presented by psychotics, etc., and because they are so commonly misunderstood by mental testers, the author suggests that the term *intelligence* be relegated to the limbo whither *instinct* has gone and that behavior be dealt with as such.—*A. G. Bills* (Chicago).

3792. *Piéron, H.* Aspects théoriques et pratiques du problème de l'intelligence. (Theoretical and practical aspects of the problem of intelligence.) *Kwart. psychol.*, 1932, 3, 1-8.—From the practical point of view it is not accurate to assign to a subject a given level of intelligence (i.e., IQ), due to the fact that many of the tasks in an intelligence test are too dependent on educational opportunities, and (which is still more important) many others call for various forms of response, verbal, numerical, logical and "common sense." The author has found low correlations for large numbers of school children between scores on tests calling forth these different forms of response. He has also selected tests even more carefully on the basis of their requirements in terms of different modes of psychological functioning, comprehension, invention and criticism, and has found that here also the correlations among these modes of response are insignificant. In making applications to psychotechnology, therefore, it is preferable not to envisage intelligence as such; but in order to characterize a given individual one should make a profile as detailed as possible, showing the results of the principal types of problems one is called upon to solve, distinguishing particularly the problems calling for comprehension, invention and criticism. From the theoretical point of view, the author considers that the "common factor" is not limited to intelligence tests, but has a more general application and is found in the execution of all mental tasks; it is a factor of ability showing itself in the most diverse functions during the course of tests of attention, memory, perception, etc., and can, therefore, by no means merit the name of "intelligence."—*T. M. Abel* (Sarah Lawrence).

3793. *Pintner, R.* The influence of language background on intelligence tests. *J. Soc. Psychol.*, 1932, 3, 235-240.—Two tests requiring different amounts of language comprehension were given to children in the first grade of three New York schools. It was possible more or less adequately to separate the children into groups from English-speaking and non-English-speaking homes. In each case, the non-English group made a better (or less poor) score on the Pintner Non-Language Test than they had made,

by comparison, on the Pintner-Cunningham Test. This held true in spite of the fact that the latter involved only the understanding of verbal directions.—*E. B. Newman* (Frankfurt).

3794. *Pintner, R.* Intelligence tests. *Psychol. Bull.*, 1932, 29, 93-119.—A summary covering 179 titles appearing in 1930. Critical studies of tests and test technique continue apace. The values of intelligence tests are being scrutinized with special reference to re-test reliability and to correlations with other types of tests, school factors, other environmental factors, personality traits, etc. Individual differences tested bear upon differences of age, sex, school grade, and inheritance, and special types are studied, e.g., superiors, defectives, delinquents, deaf, and blind.—*J. F. Dashiell* (North Carolina).

3795. *Sanchez, G. I.* Scores of Spanish-speaking children on repeated tests. *J. Genet. Psychol.*, 1932, 40, 223-231.—Three re-tests on 45 Spanish-speaking New Mexico children with Stanford Achievement and Haggerty Intelligence scales bring out gains in all abilities tested, especially mental ability and reading ability. Caution suggests consideration of various conditions under which have been given tests used for racial comparisons.—*J. F. Dashiell* (North Carolina).

3796. *Schole, H.* Sinn, Geist und Einsicht in ihrem psychologischen Anwendungsbereiche. (Sense perception, intelligence, and insight with reference to their psychological significance and application.) *Arch. f. d. ges. Psychol.*, 1932, 83, 396-428.—*R. H. Waters* (Arkansas).

3797. *Slaght, W. E.* Reliability of a self-rating scale. *Person. J.*, 1932, 11, 20-23.—A self-rating scale consisting of 70 items was administered to 40 subjects, and then readministered after an interval of about two years. The average score on each item was calculated and results on first and later administrations were compared in terms of differences between averages. For most items these differences were negligible. There was a considerable shift in the case of nine items.—(Courtesy *Person. J.*)

3798. *Watson, G. B.* Measures of character and personality. *Psychol. Bull.*, 1932, 29, 147-176.—A summary of 171 titles, under the heads: conduct measures; behavior observation; characterological indices; physiological indices; laboratory tests; knowledge and ability tests; attitudes, opinions, and beliefs; interests; self-description; reputation; combinations and batteries. In general: significance is attached to new studies by Hartshorne and May, a series of attitude scales following Thurstone's technique, and an objectivity index by Adams; the trend in Germany is toward analysis of individual types instead of mass testing as in the United States; behavior observation achieving results in nursery schools has not entered other fields; pioneer tests, as Pressey, Downey, introversion-extroversion, etc., are in less use.—*J. F. Dashiell* (North Carolina).

[See also abstracts 3431, 3462, 3574, 3631, 3643, 3657.]

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